

Anch.

# DESIGN

*A monthly journal for manufacturers and designers*



## IN THIS ISSUE

Aesthetic science: by G. B. S.

Report from Sweden

Design in light engineering

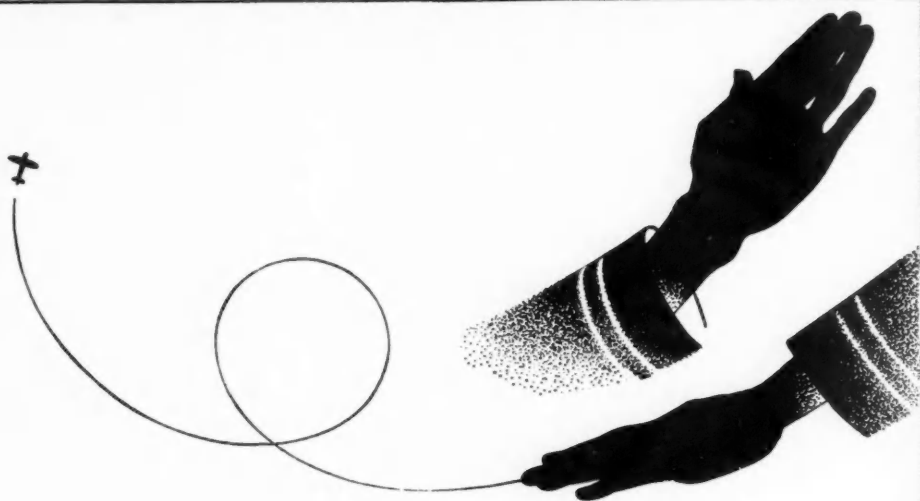
British style in package design



COUNCIL OF INDUSTRIAL DESIGN

NUMBER 23 : NOVEMBER 1950

PRICE TWO SHILLINGS



## DO PILOTS TALK T.I.?

Those swooping palms, those turning wrists, more eloquent than words when flying men foregather . . . do *they* refer to TI? Rarely, if you put it like that. But when you consider that there is not a British plane in service which cannot refer to TI engineering for *something* valuable or vital . . . from precision tubes in engine and frame to aluminium skin, from oxygen bottles, components of oil-cooler or retractable undercarriage to pilot's seat or radio parts . . . who then can doubt that pilots talk TI?

*The letters TI mean Tube Investments Limited, of The Adelphi, London, W.C. (Trafalgar 5633). They also stand for the thirty producing companies of the co-ordinated TI group, makers of precision tubes, of bicycles and components, of wrought aluminium alloys, electrical appliances, pressure vessels, paints, road signs, metal furniture . . . and essential mechanical parts for a thousand and one things which everybody uses.*



**THE SURNAME OF A THOUSAND THINGS**

# DESIGN

*A monthly journal for manufacturers and designers*

ISSUED BY THE COUNCIL OF INDUSTRIAL DESIGN AND THE SCOTTISH COMMITTEE OF THE COUNCIL

NUMBER 23 : NOVEMBER 1950

REPORT FROM SWEDEN <i>Paul Reilly</i>	4	TRADITION IN POTTERY DESIGN: 2 <i>John Thomas</i>	19
DESIGN IN LIGHT ENGINEERING <i>W. D. Cain</i>	8	LETTERING IN CAST IRON <i>James White</i>	25
BRITISH STYLE IN PACKAGING (1951 Stock List)	14	AERODYNAMICS—OR COMFORT?	28
DESIGN FOR HEATING	16	ABSTRACTS, NOTEBOOK	30, 32

COVER ILLUSTRATION: *Two Christmas wrapping papers for W. H. Smith and Son Ltd, designed by Raymond Tooby (around parcel) and Margaret Blundell (flat). See p 32*

EDITOR: Alec Davis EDITORIAL OFFICES: Tilbury House, Petty France, London SW1 Whitehall 6322

## AESTHETIC SCIENCE

*By George Bernard Shaw \**

UNTIL QUITE LATELY architecture, decorative painting, pottery, tapestry, costume, were catalogued as Art, and, as such, not on speaking terms with Science, which was concerned with mathematics, astronomy, all the ologies, and therapeutics and hygiene, popularly represented by bottles, powders, plasters and inoculations prescribed by magicians called doctors. Politics occupied a very distinct third sphere, difficult to define, as politicians were assumed to be very profound philosophers and economists with encyclopaedic knowledge, but without any steps being taken to ascertain whether they could read or write.

The artists, scientists and politicians were as completely dissociated in the public imagination as if they were distinct species, as indeed to some extent they were. But they dabbled in each other's specialities as amateurs. In this sort of poaching Art was predominantly attractive. Prime Ministers painted in oils, and Field Marshals in water colours. Mathematicians were fiddlers, less skilful than Heifetz or Menuhin, but none the less inseparable from their violins. But these were the relaxations of the scientists, whose work was held to be a dry and joyless grubbing among sordid and cruel facts, whilst Art was

what is now called Escapist, taking its votaries away from the horrors of real life into a world of happy or exciting dreams in which even the tragedies were enjoyable, and Science only an excuse for pretending that tales of miracles and fairy tale magic were authentic truths.

The iron curtain between Art and Science seemed impenetrable.

One evening I was lecturing at St Mary's Hospital in London at the invitation of Sir Almroth Wright, professionally England's greatest bacteriologist, whose relaxation was the establishment of a technique of accurate thinking and grammar. In my address I dealt with the modern craze for immunising inoculations, contending that as the vaccination experiment in the treatment of smallpox, when checked by the control experiments of cholera and typhus, both of which had practically disappeared while smallpox, after years of compulsory vaccination, had ended in two of the worst epidemics on record, we must conclude that the reduction in its ancient prevalence, on which the whole case for vaccination is founded, was actually delayed by vaccination and effected in spite of it by sanitation.

Wright sprang to his feet and exclaimed impatiently: "I believe that the effect of sanitation is aesthetic," and then sat down unconscious of having smashed the iron curtain into smithereens and made Art the most scientific of all the sciences.

*continued overleaf*

\* This article was specially written by Bernard Shaw for *Design '46*, the survey of British Industrial Design which was published by the Council of Industrial Design at the time of the "Britain Can Make It" Exhibition. It is here reprinted by permission of the Public Trustee.

Among my many medical acquaintances was a country doctor, now dead, whose children all died within a few days of their births, leaving him prolific but childless. In desperation he tried a senseless experiment. He took the last baby into the garden and shaded it in a little tent of Turkey red. That baby survived. When I last heard of him from his father, he was flourishing in the prime of life in the Antipodes. A spot of pleasant colour had made all the difference between life and death where the most intimate doctoring had failed. The suggestion is that all the improvement in our vital statistics that has been credited to doctors' prescriptions, to leeches, drugs, antiseptics and preventive operations, has been really produced by pleasant colours, pleasant smells, handsome buildings, gracious curtains, furniture and utensils, fine clothes, noble pictures, music and beauty everywhere.

When I was in Hong Kong, I was entertained very agreeably indeed by Sir Robert Hotung. We were both of the age at which one likes a rest after lunch. He took me upstairs into what in England would have been a drawing-room. It was a radiant miniature temple with an altar of Chinese vermilion and gold, and cushioned divan seats round the walls for the worshippers. Everything was in such perfect Chinese taste that to sit there and look was a quiet delight. A robed priest and his acolyte stole in and went through a service. When it was over I told Sir Robert that I had found it extraordinarily soothing and happy

though I had not understood a word of it. "Neither have I," he said, "but it soothes me too." It was part of the art of life for Chinaman and Irishman alike, and was purely aesthetic. But it was also hygienic: there was an unexplored region of biologic science at the back of it. The exploration of it is just beginning, and giving a new charm and a new interest to Science.

Our doctors now stand helpless before those terrible diseases in which the life force slips down from its human level and proliferates horribly as cancer and arthritis. The greatest doctors, when their wives die in this manner, declare desperately that they can cure nothing and can only go through their hocus-pocus and look on while the disease kills or cures itself.

There may come a time when the Council of Industrial Design will take the place of the General Medical Council, and cancer be cured by a course of Palestrina's Masses or Monteverde's Cantatas in Sir Robert Hotung's temple. Prisons and hospitals will be demolished and replaced by cathedrals. Jenner, Lister and Pavlov will go to the dustbin or the devil, and Handel, Mozart and Beethoven, Wagner, Strauss and Sibelius, Elgar and Vaughan Williams, take the places they have usurped. The headquarters of Science may move to the National Gallery.

Whether things happen in these ways or not, the Council of Industrial Design will get its feet on the ground of Science and cure the nation of its habit of regarding Art as a demoralising variety of debauchery practised only by incorrigible Bohemians and born mountebanks.

(World Copyright)

*Bernard Shaw's active interest in the graphic arts was never more evident than in his close co-operation with the illustrator and the printers of his Black Girl in Search of God, a typical opening from which is reproduced here. Mr Shaw himself roughed-out the first sketches on which the wood-engravings by John Farleigh were based*

had nothing better to do than to watch everything she did and worry himself about her salvation. She even tickled the picaninny and asked him "Suppose I had found God at home what should I have done when he listed that I was staying too long and that he had other things to attend to?" It was a question which the picaninny was quite unable to answer: he only chuckled hysterically and tried to grab her wrists. It was only when the picaninny grew up and became independent of her, and the Irishman had become an unconscious habit of hers, as if he were a part of herself, that they ceased to take her away from herself and she was left once more with the leisure and loneliness that drove her back on such questions. And by that time her strengthened mind had taken her far beyond the stage at which there is any fun in unattaching idols with knucklerrings.



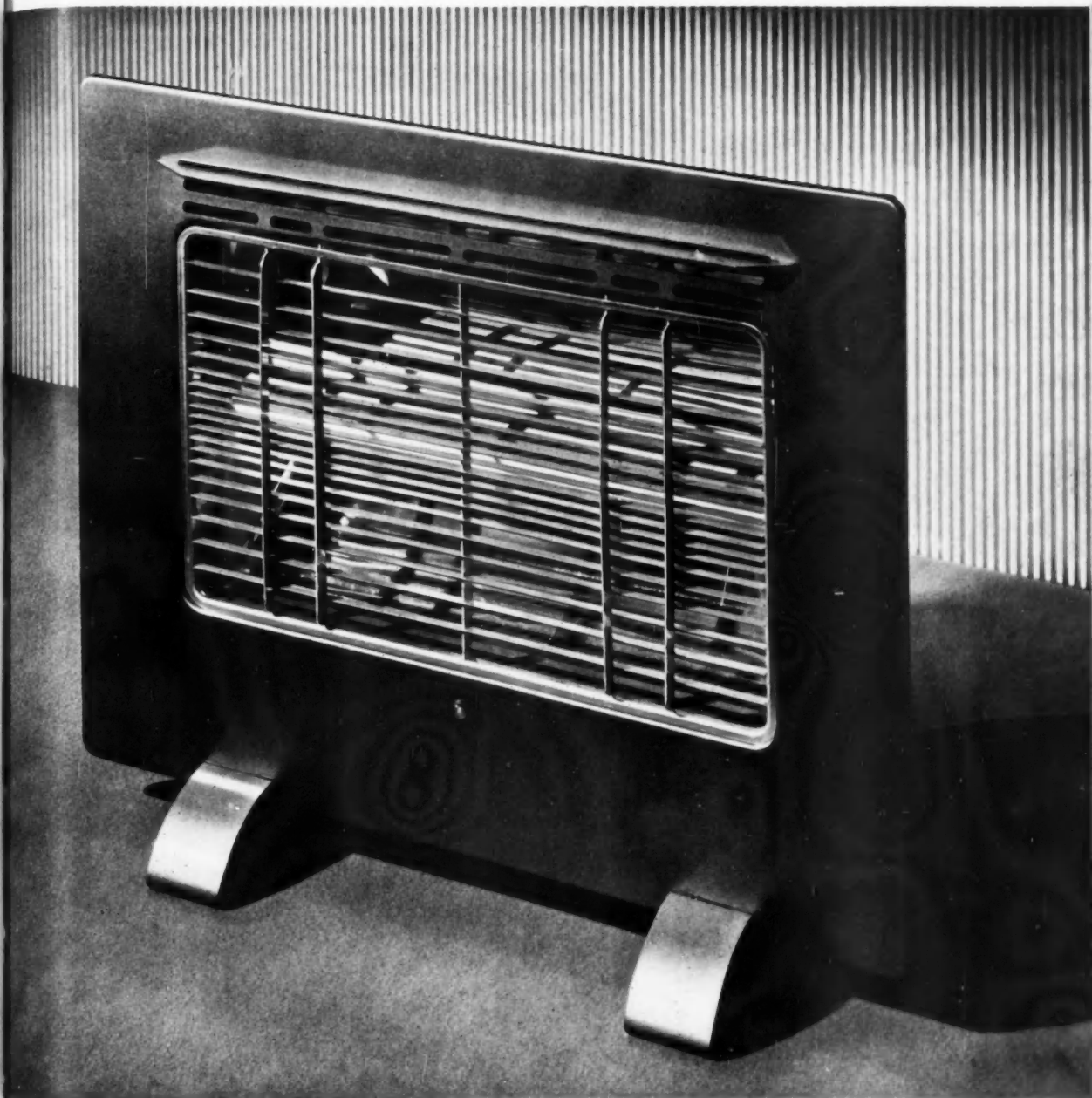
My intention was to write a play in the ordinary course of my business as a playwright; but I found myself writing the story of the black girl instead. And now, the story being written, I proceed to speculate on what it means, though I cannot too often repeat that I am as liable as anyone else to err in my interpretation, and that pioneer writers, like other pioneers, often mistake their destination as Columbus did. That is how they sometimes run away in pious horror from the conclusions to which their resolutions manifestly lead. I hold, as firmly as St Thomas Aquinas, that all truths, ancient or modern, are divinely inspired; but I know by observation and introspection that the instrument on which the inspiring force plays may be a very faulty one, and may even end, like Bunyan in The Holy War, by making the most ridiculous nonsense of his message.

However, here is my own account of the matter for what it is worth.

It is often said, by the headless, that we are a conservative species, impervious to new ideas. I have not found it so. I am often appalled at the audacity and creativity with which new ideas are snatched at and adopted without a scrap of sound evidence. People will believe anything that amuses them, gratifies them, or promises them some sort of profit. I console myself, as Stuart Mill did, with the notion that in time the silly ideas will lose their



either  
part  
, and  
there  
t the  
, and  
  
those  
down  
can-  
their  
they  
ocus-  
cures  
  
adus-  
dical  
Pales-  
Sir  
will  
nner,  
devil,  
rauss  
e the  
ers of  
  
, the  
n the  
bit of  
chery  
born  
yright)



THE NEED FOR SAFER ELECTRIC FIRES has long been realised by the Council of Industrial Design, as by other bodies concerned with safety in the home. In this new *Safera* fire, designed and made by Ferranti Ltd, a mercury switch cuts off the current when the fire is knocked over, lifted by the handle or tilted more than 15° from the vertical. The element is so well protected—by a close-fitting curved shield as well as the grille—that “even the most mischievous children” (the makers state) cannot touch it or poke anything into it. The feet are springy, so that rough handling of the fire will not damage the element. The retail price of £13 17s 7d includes £5 purchase tax.

# Report from Sweden

by Paul Reilly

Earthenware vase  
by Ingrid Atterberg  
for Upsala-Ekeby AB



AN AMERICAN CONNOISSEUR of advanced contemporary design recently visited Sweden in search of novelty and daring experiment. He swept through department stores, visited factories, met a number of architects and designers, and returned empty-handed. He had found nothing new, nothing so advanced as to be revolutionary, nothing indeed as unusual as the chairs and furniture currently coming out of some American *ateliers*. On the other hand, a Swedish economist and statistician, who had no axe to grind for any particular school of architecture, assured me that there is no architect practising in Sweden today who would consider building in any but a contemporary manner, and he went further: he said that there were very few builders in Sweden, who, if left to themselves, would not also build in the same contemporary way. Stylistic architecture with recognisable "period" features is quite out of favour.

And there lies the crux of the Swedish design prob-

lem today; on the one hand you have a notable absence of *avant-garde*-ism and on the other an equally notable absence of reaction and retrospection. It may be that the great renaissance of Swedish design which stemmed from the pioneer propaganda of men like Professor Gregor Paulsson and Arkitekt Sven Markelius in the early 1930's is petering out; on the other hand it may be that Sweden is today achieving a stability of taste and an overall standard of design such as has not been witnessed anywhere since the eighteenth century in England. When such stability is reached, the tempo of experiment is likely to slow down. Experiment in design, whether in architecture or furnishings, is usually a product of protest, of revolt against general ignorance or indifference. Where there is neither ignorance nor indifference to standards there is less incentive to eccentricity and it is certainly true of Sweden today that interest in design, in architecture and in painting is of a very high order and is extremely widely spread throughout the population.

The fact that the population is mainly rural, that the majority of townsmen are of recent peasant stock and seem barely acclimatised to living in cities, probably accounts for much of the character of the new building and of the new designs in pottery, furniture or textiles. There is an essentially rustic quality about many contemporary Swedish products. The fact, too, that there is no Swedish word for industrial design except the rather clumsy phrase *industriell formgivning* while everyone is familiar with their one-word equivalent (*slöjd*) for our phrase "arts and crafts" suggests a less urban and less sophisticated society than our own.

This *naïveté*, which finds expression in simplicity of construction and decoration, might perhaps be mistaken for austerity. The propaganda of the Svenska Slöjdföreningen (their nearest equivalent to the



Cover of the first issue of the new Swedish magazine *Kontur*, noted on p 32

British Design and Industries Association or the Council of Industrial Design) does certainly, for British tastes, err on the side of intellectual frost, but the average Swedish home, with its indoor greenery, its pretty, if pale, wallpapers and curtains, its sensible small furniture, its handcraft ornaments and its modern oil paintings seems perfectly natural and at the same time eminently contemporary.

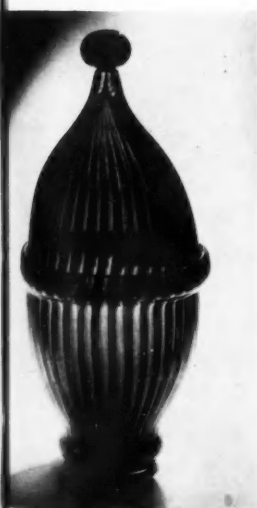
It is of course always dangerous to talk about the "average" home in any country, but there is real evidence today in Sweden of a generally accepted standard in interior decoration and furnishings.

The only section of the buying public which still lags behind this contemporary movement seems to be the upper middle class, but here too in the last few months there has been a remarkable development. Only a year ago the great Stockholm store, Nordiska Kompaniet, was selling its contemporary furniture chiefly through an annexe shop called NK Bo. Here were set out typical room corners furnished with inexpensive light coloured furniture, simple patterned curtains and wallpapers, and pretty, unostentatious light fittings. The clientèle was mainly professional people and educated artisans. Special attention and service was given to young engaged couples, which included evening classes on home furnishing. But the rich did not patronise this department. They bought traditional furniture in the parent store, large over-corniced Renaissance pieces and expensive gilded replicas of French Rococo and Empire suites.

The policy of NK, however, was set firmly towards contemporary design. The problem was how to



*Above, new white earthenware bowls designed by Stig Lindberg for the Gustavsberg Potteries; the lids can serve as auxiliary dishes. Below, individual ornamental glass from the Orrefors studios: left, covered vase in two tones of purple made by the Ariel technique, designed by E. Ohrström; centre, decorative vase designed by Ingeborg Lundin for the Graal technique; right, three new Graal pieces designed by Edward Hald, Hon. R.D.I. The Graal technique gives flat patterns in colour inside the glass; the Ariel technique affords three-dimensional air-pocket patterns, also in the thickness of the glass*





Three examples of the new Nordiska Kompaniet Futura furniture, designed to appeal to middle-class customers who do not take easily to inexpensive contemporary furniture in light woods. Note, in addition to the use of dark wood, the three concessions to the desire for richness and ornament—left, the trellis settee arms; centre, the prominent polished brass handles; right, the router-made decoration on the upper cupboard doors and the polished brass hinges and handles

#### REPORT FROM SWEDEN *continued*

wean this middle-class taste away from these ostentatious reproductions. They found the answer—it may be the same answer in England—by catering for just those desires which the purists scorn, the desire to have the bank-balance reflected in the furniture, the desire for solidity, for the appearance as well as the reality of comfort and well being, in short all those urges which were the other day expressed by a London housewife who asked for some “proper brown furniture” when offered a piece of bleached oak. The design department of NK, led by Arkitekt Elias Svedberg, developed the *Futura* suites, some pieces of which are illustrated here; they were contemporary in size, shape, usefulness and construction; compared with the *Triva* furniture sold in NK Bo the pieces were expensive; the woods were dark, mainly mahogany, but they were not glossy; the handles were mainly brass and features were made of brass hinges; some decoration relieved the plainer surfaces, but the decoration was such as could honestly be done by machine processes. The result was instant sales to the very class which till then had shunned the “new-fangled” simple furniture. Today over two-thirds of the furniture department of the main NK store (corresponding, perhaps, to Harrods in London) is

given over to contemporary furniture and, I was told, 65 per cent of the furniture turnover is securely contemporary. This figure will rise, for the buyers are now convinced. The pseudo-Renaissance pieces hang heavy on their hands and are sold, it seems, only to British Commonwealth emissaries sent over from Moscow to buy pieces for their new embassies.

The intellectuals of the Swedish functional movement look somewhat askance at this kind of compromise; they fear the seeds of reaction in this effective propaganda to the prosperous unconverted, but to anyone with some experience of pushing the same steam-roller up English hills, this new technique of persuasion at point of sale must be as interesting as that earlier pilot experiment, the establishment of the 100 per cent contemporary shop, NK Bo.

The same sort of sober exploration of markets and techniques is a feature of other industries besides furniture. The advance seems fairly general whether in textiles, glass, pottery or that crucial domestic industry, electric lighting. At the Orrefors glass works, for instance, the directors realise that the familiar naturalistic engravings of nude goddesses on drinking goblets have had a good innings. Edward Hald, the Orrefors art director, is encouraging his team of four designers to look ahead and to develop new techniques. These are at present limited to individual





*A dual purpose table in the NK Futura range. The two-flap top rises on a piano-stool action to provide a small dining- or card-table when opened. When screwed down and closed, it becomes a low occasional table taking up little floor space*

pieces of great price, but from them may come new shapes and patterns to enrich the company's commercial production.

The same liberty of design experiment is encouraged at the Co-operative Gustavsberg potteries, where young Stig Lindberg, one of the most versatile and exciting designers alive, has a free hand to try out new shapes and patterns whether in pottery, glass, textiles or even in vitreous enamelled plaques—an unusual offspring of the Gustavsberg bath-tub factory about which more will be heard. A recent appointment to the staff of the Upsala-Ekeby pottery promises fresh ideas for mass production as well as for studio potting: Arkitekt Viking Göransson is now in charge of design development and seems to have won the confidence of the young designers on his staff.

In spite of all this healthy activity there are still some dissatisfied souls in the Swedish architectural and design world who feel that though the modern movement may have passed the point of no return it may well get bogged down in its own success. Indeed the danger of grooves, ruts or tramlines must always be present in so formal and conformist a community as the Swedes, but an Englishman, fresh from his welter of conflicting styles, cannot fail to be impressed by the evidence of a living tradition of contemporary design.



*Two examples of the cheaper lightwood or painted NK Triva furniture. Above, a popular combination of unit shelves, cupboards and writing desk. Below, upholstered sewing chair and painted fitted work-box. Note how the simple standard lamp, with the currently favoured pleated fabric shade, directs the light on to the work in hand. Moquettes, whether cut or uncut, are seldom used for chair coverings in modern Swedish homes*

[More Swedish photographs, p 18]





# Accent on performance ... and ease of production

by W. D. Cain \*

ONE OF THE eternal problems of industrial design is to decide how high standards in both aesthetic and technical design can best be achieved. In the engineering industries, the designer must produce highly complex designs, requiring specialised technical knowledge, and the emphasis must be on performance, not appearance.

All design effort must be co-ordinated to this purpose. In small plants this is achieved by making one man responsible for design. In larger firms, one designer can still bear the direct responsibility for all aspects of design, but he will have the advantage of specialist advice within the company.

Even in a small firm, moreover, the designer has access to specialised information from bodies such as the British Standards Institution, the Production Engineering Research Association (PERA) and many other industrial associations which publish information on materials and processes. Societies such as the Physical Society and the senior engineering institutions also publish information which can be used to help solve design problems.

The exact function of an individual designer is therefore related to the size of the firm and to the complexity of the work. The degree of specialisation required of him will vary with the extent to which mass-production methods are employed in his plant.

Generally the concept of a mechanical design can be divided into two stages. First is the planning of

a mechanical device to fulfil a given function; in a machine tool, this consists of movements and the application of forces to shape material in a particular way. Second is the cleaning-up and the arrangement of the machine to permit the maximum operational efficiency, as well as ease of manufacture.

These processes may be described as the *technical* and (in a specialised sense) the *functional* design. They can never be entirely separated but the relationship between them can vary widely. One method, often applied where traditional designs are concerned, is to regard the functional design as a separate operation; another is to regard the two stages as separate but consecutive steps in the production of the design; a third is to conceive the design on an integral basis, and to regard any preliminary steps as purely experimental. With any of these methods the functional design may be evolved either by employees of the firm or by consultant designers.

In the machine-tool industry, the technical design consists first of assessing the requirements of the projected machine. With a general-purpose machine such as a centre-lathe, questions of policy, technique and tradition will be involved. If the machine is for a special purpose the task is more straightforward. The past experience of the designer enables him to assess the possibilities of improving on previous designs and from this knowledge a specification of the desired performance is drawn up. The designer's technical requirements in this field are an expert knowledge of mechanical engineering and experience of machine processes, a knowledge of various control

\* Of Marconi Instruments Ltd—whose help in supplying technical information and illustrations (5-10) for this article is acknowledged.



1: "The exact function of an individual designer is related to the size of the firm . . . and the extent to which mass-production methods are employed." The large and well-lighted engineering drawing office shown above is at Vauxhall Motors Ltd, Luton

methods (e.g. electrical and hydraulic), and a specialised knowledge in the particular field involved.

Having agreed on a specification, the form of the machine is decided; the technical design work involved consists of such tasks as calculating gear trains having the correct ratios and load capacities, designing castings of maximum rigidity, and planning the disposal of swarf.

A main aim of the functional design is to ensure that the operator suffers the minimum fatigue. The criterion by which a machine tool is judged is the ratio:

*goods out : money in.*

Among the factors affecting this ratio are operator fatigue, accident-proneness and quality of output.

The placing of the machine controls and a reduction in their number are therefore of great importance. The lighting of indicators with built-in lights where necessary, and the distinct marking of controls are essential. Controls should be shaped for the convenience of the user.

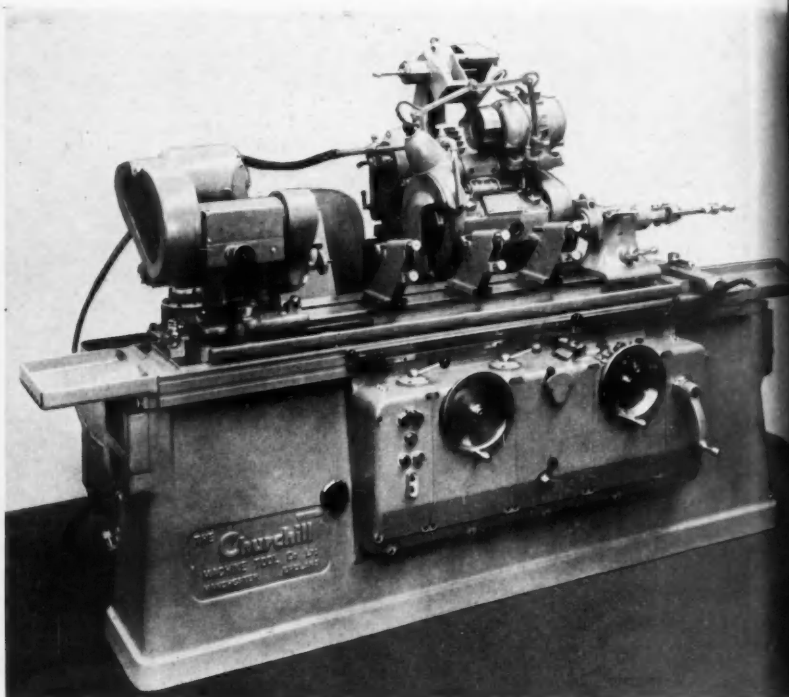
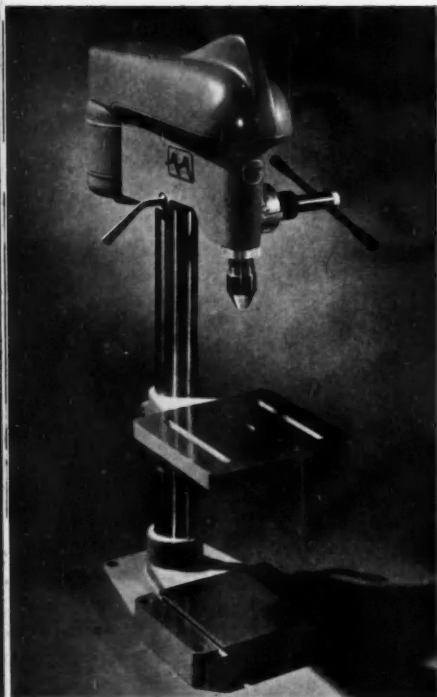
The shape of the machine also must be considered

from the operator's point of view. He must feel confidence in it, it must be easy to clean, its colour should be pleasant, and in contrast with other equipment without dazzling.

Where the product involves co-operation between electrical and mechanical engineers, the integration of the efforts of the design team becomes more involved. In machine manufacture, the function of the electrical engineer is primarily to provide a service in the form of control apparatus or motive power for a basically mechanical device, but where the main purpose of the product is to provide some electrical phenomenon, as in radio instrument manufacture or the construction of electro-medical apparatus, it is the electrical engineer who takes prime responsibility for the function of the product.

To illustrate the more complex relationship thus involved, the accompanying tables show the elements in the design team of a leading electronic instrument manufacturer.

As can be seen from Figure 3, several departments are required to work as a team to create a new product.



2: The fact that performance is the first consideration in machine-tool design does not mean that appearance is unimportant. Illustrated here are: Left, full-scale model showing suggested redesign of a standard American tool by a senior student in the Industrial Design Department of the Chouinard

Art Institute, Los Angeles. Centre, universal grinding machine, model PBW, designed and made by the Churchill Machine Tool Co Ltd, Broadheath. The apron is standardised for several Churchill machines and built in quantity on line assembly. Right, precision drilling machine designed by G. N. Bridges

#### ACCENT ON PERFORMANCE

*continued*

The sequence in which they operate on a typical project is shown in Figure 4. The mechanical designer is responsible jointly with the electrical designer for the operating efficiency of the product; he is also responsible for the appearance and for keeping a close watch on the manufacturing costs. The precise relationship is difficult to define, and indeed will vary according to the product involved; but the essential contribution of the mechanical designer is the integration necessary to see a project through from requirement specification to successful product.

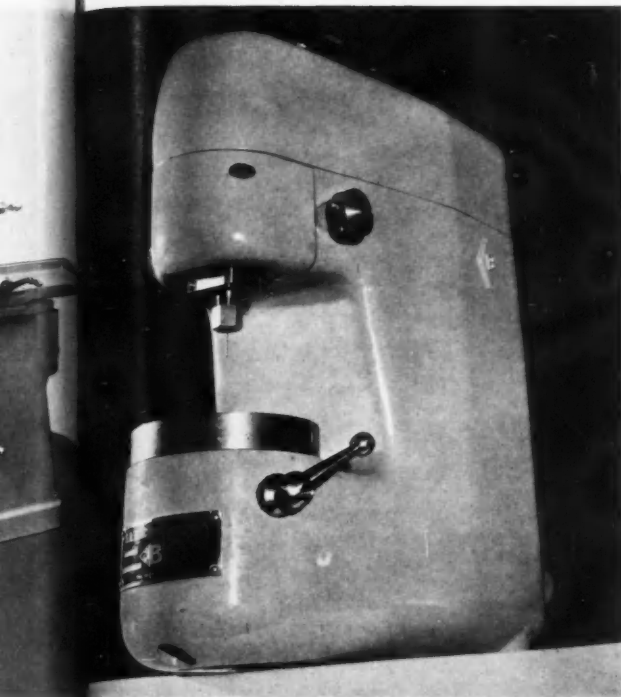
One of the most important factors which a designer must consider in this industry is the necessity of designing his product to suit the available manufacturing facilities. Great economies can be effected by observing this, especially when the products are diverse and quantities small. There is, of course, a

continual interaction of forces in this respect: obviously it is to advantage that the factory should install the most efficient plant to manufacture the article, but this ideal is not always practicable and the attitude of the designer must be one of co-operation.

#### Cost cut from £11 to £1

The unit shown in Figure 5 is a case shell for an electro-medical instrument which is to replace an earlier version: it provides improved facilities, in addition to offering great economy in manufacture. From this standpoint the first consideration was choice of material. That used in the original was largely brass which cost £11 per unit. One object of the new design was to demonstrate that thin gauges of sheet steel could be used successfully for the purpose. The result was a reduction in material cost to £1 per unit—made possible by using spot-welded box-stiffeners, as shown.

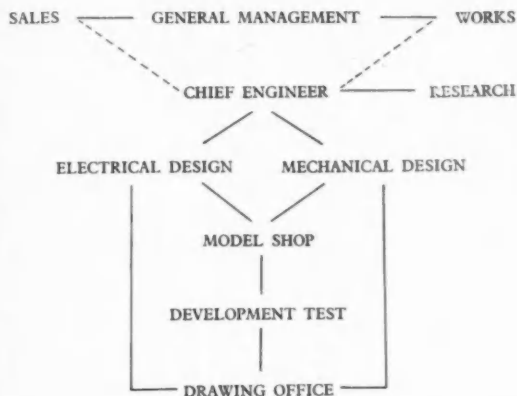
Next, the layout and constructional method were tackled. Floor space is at a premium in this particu-



and produced by S. N. Bridges and Co Ltd, London; overall height, 16½ in. It is made of silicon aluminium and cast iron. Special features include a built-in switch mounted on the side of the outer housing, which enables the operator to control the machine from the front, and provision for horizontal drilling

lar application, so the layout was planned with this in mind, resulting in a reduction from 28 × 40 in. to 15 × 20 in., which further reduced cost. The construction of the original was by a sectional framework and screwed panels, a cast control panel and a large chromium-plated top. The framework alone involved the assembly of more than 100 screws and nuts, and the inspection panels were attached by a further 40 screws which necessitated expensive drilling and tapping, and prolonged assembly time. The cast panel was expensive and required extra time for finishing; the chromium plate also increased cost.

Every one of these items was eliminated from the new design. The construction of the case shell is almost entirely achieved by simple folded sheet-steel sections, assembled by spot welding. The screws have been reduced to two for the inspection panels; no castings or large plated parts are used and the only gas welding is applied to the essential radius edges of the top section. At the same time the appearance is improved; the design is clean, with no projections.



3: Elements of the design team of a manufacturer producing electro-mechanical equipment

STAGE		ORIGIN
1	Demand	Sales
2	Preparation of requirement specification and order for development	Management Sales and chief engineer
3	Preliminary circuit investigation	Electrical designer
4	Preliminary design and experimental work	Mechanical designer Model shop
5	Circuit design	Electrical designer
6	Mechanical design	Mechanical designer
7	Rough model	Model shop
8	Test of rough model	Electrical and mechanical designers
9	Approval of rough model	Management Sales and chief engineer
10	Working drawings	Drawing office
11	Complete prototype(s)	Model shop
12	Test of prototype(s)	Development test
13	Approval of prototype and final specification	Chief engineer and sales

4: The sequence in which the departments shown in Figure 3 operate

*continued*

It is important to note that the economies have been achieved not by expensive tooling but by restriction of methods to those which can be readily handled in the particular factory.

The treatment of a design is naturally governed by the relationship of customer appeal to cost. Usually this relationship is broadly laid down as a matter of policy but careful mechanical design can frequently offer increased appeal at equal or even less cost, as in this cabinet.

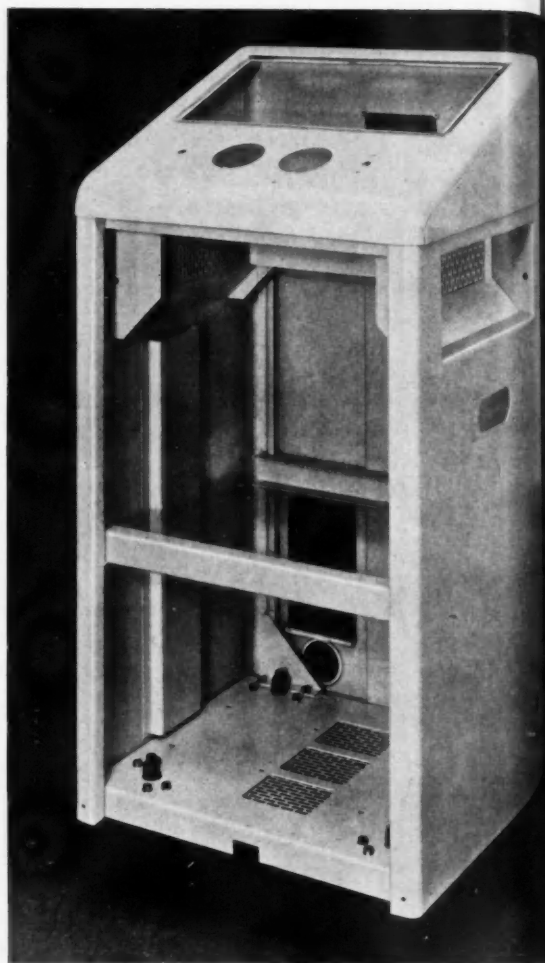
#### **Appearance unchanged, production simplified**

A further example of attention to engineering methods is shown in a detail of case treatment. It was desired to construct a case using shallow pressings for the end sections A and B, Figure 6. The procedure was to spot-weld sections C and B together, and then gas-weld A to C and B. The difficulty of this construction lies in the trap which is formed by the sections at the weld line. Flux retained at this point cannot be washed out, and corrosion occurs. In addition, cleaning the welded joint is expensive.

A revised construction method is shown in Figure 7 which eliminates both these difficulties. It also avoids the use of pressings requiring expensive tooling, and offers greater flexibility with regard to size. In this method the section A is a channel, as shown, notched and bent to form the frame of the case. The back is subsequently spot-welded in and the plates corresponding to B are simply folded with a flange on all sides and spot-welded in place. The join in the main section can also be spot-welded with a supporting plate.

The outward appearance and the function of the case are similar in both instances, but important advantages are gained by study of manufacturing technique. The doctrine of avoiding press tools may be viewed with surprise at the present time: but no manufacturing process can be applied successfully without discretion. There are many branches of light engineering where output is restricted to small batch production and in these the designer must take care to devise a product which does not involve a tool charge that is too high. When the quantities are large, then and only then can he economically use die-castings, mouldings, deep drawn pressings and so on.

In the following examples of modern electronic instruments, the first has a case constructed as des-



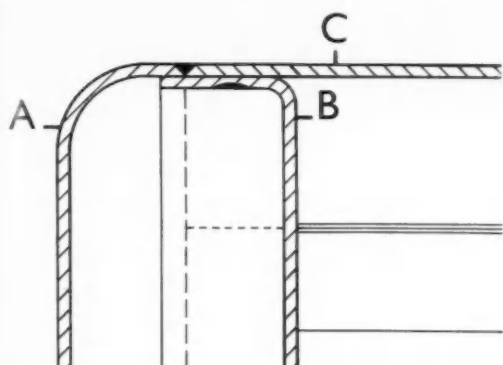
5: Material cost cut from £11 to £1 when this sheet steel case replaced an earlier version, made largely of brass. It is better-looking, costs less to make, provides improved facilities—all achieved as a result of co-operation within the factory organisation

cribed above; the second is a larger and more complex instrument but here again the same general principles of design have been followed.

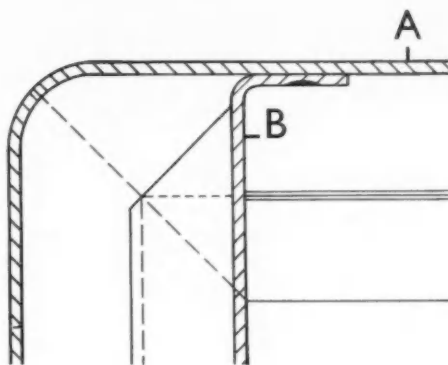
Figure 8 shows a typical measuring instrument which embodies several of the features mentioned. Worthy of note are the end pockets which ventilate the case, act as handles and contain leads; and the meter, which is of special design, as in Figure 9.

Figure 10 shows a standard signal generator, strikingly different from the box-and-panel-with-knobs design which has been typical for many years. This





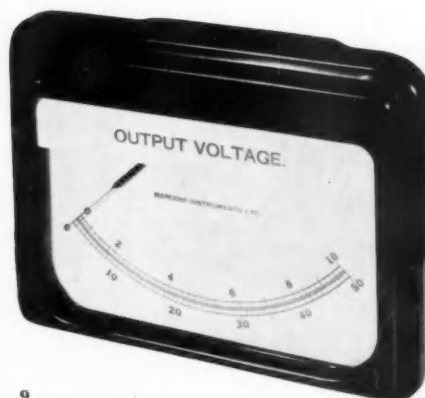
6: Shallow pressings were used for end sections A and B of this case. Sections C and B were spot-welded together and A was then gas-welded to them. A trap for flux was formed by the sections at the weld line, and corrosion was liable to occur



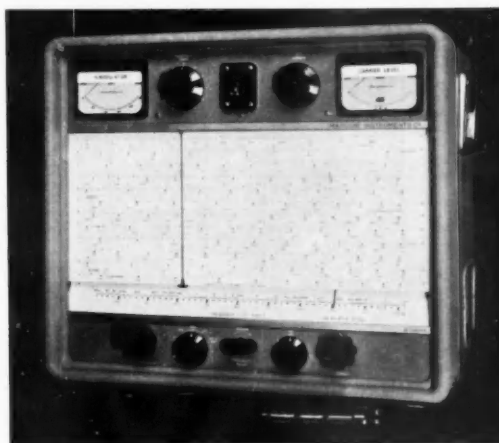
7: Here the function and appearance of the case, Figure 6, are unchanged, but study of manufacturing technique brings about important advantages. Section A is a channel, notched and bent to form the frame of the case. The back is spot-welded in and the plates corresponding to B are folded with a flange on all sides and spot-welded in place



8: In this electronic measuring instrument, with case made as shown in Figure 7, the end pockets act as ventilators and handles, and contain leads. The meter has been specially designed and is of similar type to that shown above, right: Figure 9



9



10: Standard signal generator with built-in illumination, breaking away from the "box-and-panel-with-knobs" type of design, familiar for many years

instrument embodies built-in illumination, direct-reading scales of increased length which are easy to read, convenient grouping of controls, and a generally high standard of appearance combined with efficiency.

These examples may serve as a pointer to some of the principles which govern design in the light engineering field. The main features are insistence on efficiency in operation; careful assessment of requirements; intimate understanding of manufacturing methods, *plus* constructive thinking and the ability to integrate ideas from a variety of sources.



1: Pressed powder box designed by Reco Capey, RDI, for Yardley



2: Designed by Tom Wolsey for Executive Perfumes Ltd; made by Storey Evans & Co



3: Designed by Kenneth Rowntree for A. Romary & Co Ltd



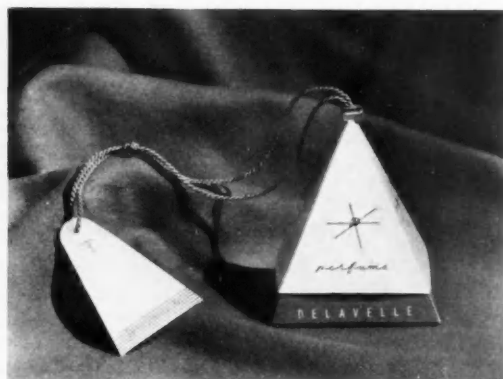
4: Pulp container for Greybeard whisky by E. C. Gillanders of Universal Pulp Containers and G. P. Gowland



5: Jam labels designed by Frank Mortimer, printed by Hind, Hoyle & Light Ltd



6: Shampoo pack by Milner Gray, RDI, FSIA, and Ronald Ingles, MSIA, for Pritchard & Constance (Mfg) Ltd; printed by A. B. Swain & Co



7: Novelty perfume pack with gift tag designed by W. M. de Majo, MBE, MSIA, and made by Richard Pye & Co

## British style in package design

A correspondent's selection from the 1951 Stock List shows that package designers in this country "are laying the foundations of a vigorous, elegant and thoroughly contemporary style"

A GOOD PACK can strengthen the desire to try a product and make one buy. Larger sales—export sales especially—can be influenced, sometimes to a spectacular extent, by a well-designed exterior. These facts are so widely realised today that we are inclined to forget that the acceptance of package design as an important factor in marketing is of recent growth.

Our manufactures have won generations of customers in many countries, because of their high quality; but often in the past dependability was disguised in poor wrappers and unimaginative cartons. Today, fine products can be packed to look fine and to suggest modernity, good quality and style. Many manufacturers are realising that good packaging gives them an extra salesman. Some consumer-goods industries (*e.g.*, soft drinks, biscuits) have recorded significantly increased sales in which new package designs have played a part. The use of transparent materials (as in 2 opposite), bright colour and strong contemporary design is building up export sales. Those industries and firms which have not yet used this new work may find it profitable to look at their packaging with a fresh eye.

Already, before the war, a small but enthusiastic group of artists (among whom Milner Gray and Jesse Collins were prominent as teachers as well as designers) was at work in Britain. Their example and influence has grown steadily, and now young men of originality and talent are specialising in package design. They are laying the foundations of a vigorous, elegant and thoroughly contemporary style, which has the added merit of being thoroughly British.

Good package design in this country is not so decorative, not so stylised as the dainty French concoctions; it has not quite the solid technical perfection of the good German work; it offers a sober, common-sense solution. It employs good lettering effectively. There is restrained use of borders, and sometimes, where it is appropriate to the product, a period flavour

in decoration or surround (3, 4). The colour is clean, and attracts the eye on crowded shelves. The lettering of the name itself is often used as the focus of the design (2, 5). The pack forms an integrated unit: alone in the hand, or massed for display (6, 8), it serves both to proclaim and to protect the product.

Symbols have been well used as decorative features. The martins on Jesse Collins' packs for Martin's cigarettes, the Courage cockerel (DESIGN, No 19 p 20), the Spicer arms, all have dignity and verve.

Our best package designs are admired both in Europe and America; if we could only bring the majority up to the standard of our best, we should have no need to fear international comparisons. C. W. C.



8: Designed by A. R. Hundleby, MS1A, packs made by Harris & Walford Ltd; display carton by Johns, Son & Watts Ltd

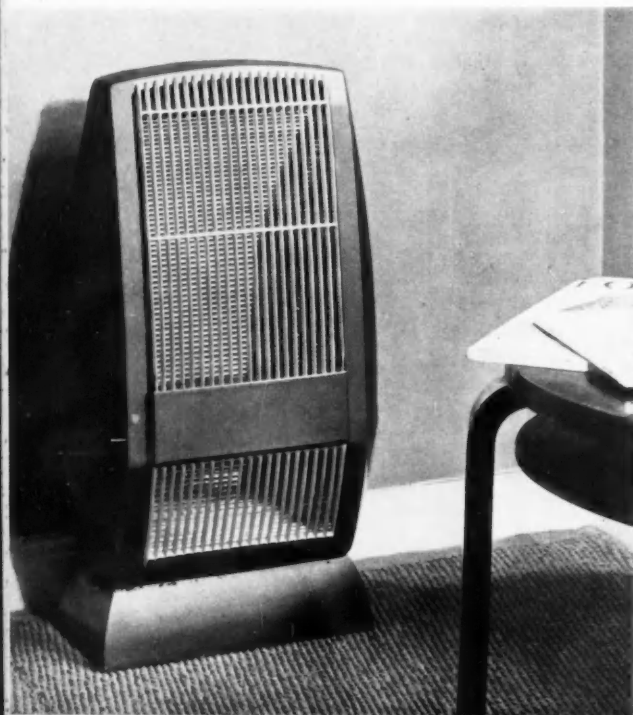
Each pack contains a transparent hermetically sealed envelope of Alkathene which is moisture proof, and so prevents the needles from rusting—usually a problem in tropical climates

## Space-heater development: from Plasticine to production

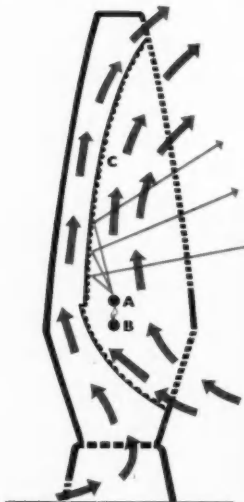
EASE OF PRODUCTION and high thermal efficiency are the outstanding features of a new gas space-heater produced by Radiation Ltd, the *Merlin*.

The heating unit consists of a steel element with a row of gas-jets below it and a curved aluminium reflector behind it, inside a casing of unusual—slightly swelled—shape. This shape is functionally sound: it avoids right-angle corners, as is desirable with the pressed-steel construction employed, and it provides greatest strength at the widest point. Moreover, it enables the front and back halves of the case to be made as two identical pressings: in the front half, a large aperture is then blanked-out, and into this the grilles are subsequently fitted. These grilles, of anodised aluminium, are separated by a hinged panel giving access to the interior for cleaning or servicing. The base is a casting. Other features are silent operation, flint-ignition lighting and concealed floor fixing brackets. Finishes are metallic gold and pewter colours and the retail selling price is approximately £11 15s.

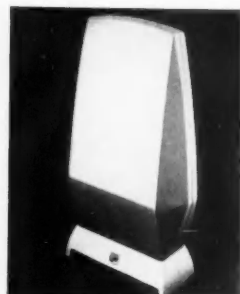
*The shape of the new space-heater (below) is both distinctive in appearance and sound from a production standpoint, avoiding right-angle corners*



*Development from the first Plasticine model (left) through the full-sized wooden model (right) to the Merlin as now produced (below) shows little change in shape. The handle on the first model became unnecessary when it was decided that the opening flap should be suspended on hinges to open upwards instead of having a full-width hinge across its base. The grille is not carried right to the top, as was originally suggested, and its vertical slats are strengthened by two cross-bars not shown in the models*



*The back half of the casing (below) is identical with the front half before it is blanked-out to take the grille. Air which is subsequently heated from the back of the reflector enters through the broad opening across the base*



*The Merlin space-heater has been designed for high thermal efficiency. A steel element A is heated by gas burners B in front of a reflector C. In this diagram, the blue arrows indicate the air flow which enables heat from both sides of the reflector to be utilised, by convection. Radiated heat is shown by red arrows*

A thermal efficiency of 90 per cent is claimed. Not only the air drawn in at the front through the lower grille but the air entering at the back, through an opening in the base, is heated. Almost all the heat from both sides of the reflector is, therefore, utilised; what is not radiated is carried out into the room by convection. The entire outer casing remains cool enough to be touched and the *Merlin* is therefore particularly safe for use in nurseries or children's bedrooms. The reflector, which is ribbed to increase its

surface, radiates the glow from the heated element and helps in giving a feeling of warmth.

The heater is a product of close co-operation between Radiation's technical staff and Richard Lonsdale-Hands Associates, their industrial designers. The designers were called in as soon as the basic principle of operation had been decided, and it is evident from the accompanying illustrations that relatively few changes had to be made in their planned shape of the heater during development.

## 'Appearance played a great part' in increasing AB fire sales

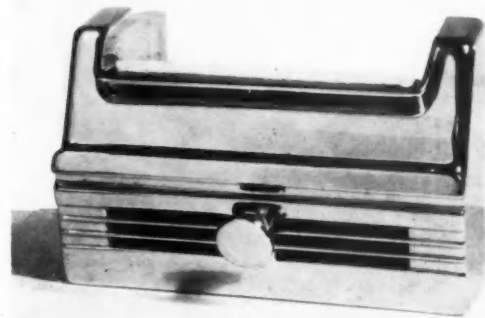
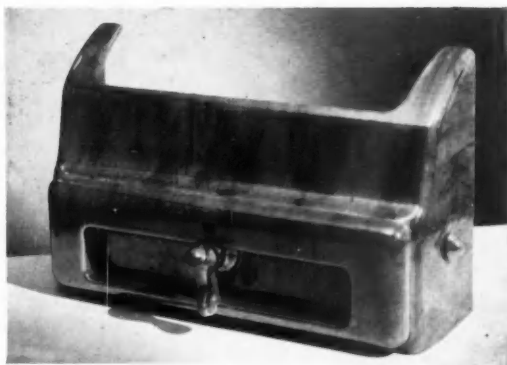
SOME PEOPLE STILL BELIEVE that if a product is functionally adequate it will sell regardless of its appearance. This belief should be shaken, however, by the existence of products which have remained the same in operation but have increased their sales as a result of improved appearance. A current example is the *AB* "fire," a slow-burning hearth to fit an ordinary grate, with an air-control regulator which enables it to burn all night.

This fire is being manufactured in its original form, by the Grangemouth Iron Co Ltd (a subsidiary of Federated Foundries Ltd) under the name *Sofono*. This model is itself of pleasing appearance and it is selling well; but when the company decided that another subsidiary, Federated Sales Ltd, should also manufacture the fire it was agreed that it should be redesigned to appeal to a much wider market. A consultant designer, Norman Rissen, was called in for this purpose. The design was evolved in about seven weeks and production began in June 1949 without even a model or a prototype being made. A widespread advertising campaign was subsequently launched, and—to quote—"By September the fire was being marketed, by November it was an obvious success and by January 1950 a second works had to assist with the production as the first plant was not sufficient to cope with the orders received. . . . It was quite clear that the appearance has played a very great part in the success of this appliance."

A feature of the design which is believed to have appreciably influenced the increase in sales is the upper lip, which juts outwards, and so helps to divert the heat into the room—not up the chimney.

Several suggestions for further improvements have been received from users and these may be incorpor-

ated later. The knob for regulating the air-flow is, for example, to have a slightly serrated edge which will give a better grip than the present smooth round edge.



The *Sofono* fire, upper picture, and the *AB* fire, above, are functionally the same though their outward appearance differs considerably. In the later model, the panel containing the air-control regulator appears to be an integral part of the fire, not a separate part added as an afterthought



## STYLE WITHOUT STYLING

THE THIRD Scandinavian Congress for Industrial Design and Handcrafts was recently held in Stockholm, with the Svenska Slöjdföreningen generously acting as host to more than 200 designers from the four Scandinavian countries. A small exhibition of Swedish manufactures was staged in the Conference ante-room to illustrate the point that good design is rooted in function, purity of line, simplicity of form and excellence of finish, rather than in embellishment.

The Svenska Slöjdföreningen have an active ally in the Hemmens Forskningsinstitut (Home Research Institute) which, through the study of household



*Pressure cooker  
designed for Skultuna  
by Erik Fleming*

needs and the examination of domestic equipment already on the market, is coming to much the same conclusions. These are disseminated through the Institute's small booklets which are sold to housewives by the hundred thousand.



**STAINLESS STEEL:** Plates by Mölntorps Verkstäder AB; sauce-boat and dish designed by Sigurd Persson for AB Silver och Stal; cutlery by Folke Arström for AB Gense



**POTTERY:** Pieces from the *Domus* service, designed by Gunnar Nylund for Rörstrand. (Photographed, like the other products on this page, by Ateljé Sundahl, Stockholm)



**FURNITURE:** Stacking chairs designed by Gunnar Eklöf after Dr Bengt Åkerblom's research. Moulded mahogany back and seat, beech legs. By Svenska Möbelfabrikerna



In contrast with the moulded shapes of Eklöf's chairs, left, are these Windsor-type "fan" chairs, designed by Sonna Rosén for Nässjö Stolfabrik

# ENGLISH TRADITION IN POTTERY DESIGN

by John Thomas, MA, PhD \*

WHAT IS MEANT by "tradition" when applied to a craft like pottery? Too often the word implies the old—something with which our ancestors were concerned. But every generation of potters, if it is creative, adds something to the achievements of the past. There is always, besides the traditions of the past, a tradition in the making.

The foundations of the British pottery industry were laid by Whieldon, Wedgwood, Adams, Spode, Minton and their contemporaries and successors. Before the eighteenth century, English pottery was a peasant craft with purely local demand and periodic sales at fairs. Since that time, English pottery has included a number of non-English patterns, consciously imitated or borrowed from abroad. Much of the assimilation of foreign influences into English pottery design is a sincere tribute by English potters to foreign art. Josiah Wedgwood was the first to recognise the achievement of Greek and Etruscan potters. His contemporary, Josiah Spode, copied Chinese designs in his early Blue Spode ware, and subsequently used Indian and Italian patterns.

Later potters, like Minton, introduced French artists to decorate their wares in grand Sèvres style; while mastering and applying foreign designs to their English pottery, they thus gained experience and a reputation which later enabled them to produce their own designs, which we now regard as part of the English tradition.

The arbiters of design in pottery are four at least; (a) the potter, (b) his designer, (c) his salesman, wholesale or retail merchant, (d) his customers.

The potter himself decides what wares he will specialise in making. He decides the raw material, the colours and the formula from which his wares are

to be made; the machinery that grinds, mixes, throws, turns, makes or moulds his wares. The first Josiah Wedgwood's secret formula for the body of his wares affected the design of his Yellow or Queen's Ware, and of his medallions or plaques. Spode's bone china formula enabled him to produce some exquisite designs still used by his successors.

When the potter has mastered the ceramic chemistry of his raw material and the shape of his ceramic bodies, it is the artist's and designer's turn to ornament and decorate the fired ware. Wedgwood introduced his famous Flaxman figures; Minton his Solon's "Pâte-sur-Pâte." In more recent times, Wedgwoods commissioned Keith Murray to design both ornamental vases and tableware, using his and other outside designers' services besides having their own design staff. To take one among many other examples of "resident" designers, Doultons employed the late Charles J. Noke and now employ his son, Cecil J. Noke, as leader of a team of seven designers and modellers.

The potter and his designers produce for a market, at a price that must at least cover

costs of production and should yield a profit as well. They must, therefore, plan their designs, decoration, shapes, texture, sizes and indeed the quality and style of their wares with the requirements of the consumer in mind.

The good salesman is a specialist in studying the requirements of the pottery market. Through his contacts at home and abroad he discovers the special tastes of people in different economic classes, social groups, races and nationalities whose different habits and tastes are reflected in the demand for different ceramic products. Market research, the study of newspaper advertisements and sales campaigns, exhibitions and pottery displays, Housewives' Forums and public opinion polls are some of the methods used. The pottery manufacturer is thus helped to



A potter's business card in use 1780-1805. The firm—now William Adams and Sons (Potters) Ltd, of Tunstall—traces its origins back to 1657

\* In this article Dr Thomas concludes his analysis of the factors influencing the design of British pottery. His first article appeared in DESIGN, No 22, pp 7-10.



11, 12: FUNCTION AND DECORATION: *Left, traditional English teapot shapes. They have remained in production through the years because they have proved efficient in use. But efficiency can give no guide to choice in decoration: above right are seen five teapots of identical shape—their appearance radically affected by their different styles and degrees of decoration*

#### ENGLISH TRADITION IN POTTERY DESIGN *continued*

decide what old lines to withdraw—or revive—and what new lines to put on the market.

In the eighteenth century, Wedgwood found it indispensable to have Matthew Boulton of Birmingham as his wholesale pottery salesman, and Thomas Bentley at Liverpool as his pottery merchant. In fact, so indispensable did Bentley become to Wedgwood's home and overseas trade that he made him his partner at Etruria. Bentley was a connoisseur of the dinner and tea-table tastes of the gentry, as well as of the nobility whom Wedgwood at first sought for his pottery patrons. He had a lot to do with the design and decoration of the famous Empress Catherine dinner service of Wedgwood, with its frog as a feature of the oak-leaf border; and the numerous scenes of British mansions, castles and landscapes.

Similarly, Spode promoted his London merchant, William Copeland, to partnership; today the firm bears the family name of his direct descendants, as there is no descendant of Spode in the firm.

Although the three factors described above are potent in producing designs which help to mould the customer's taste in pottery, one must realise that the customer, who pays the piper, calls the tune.

However well decorated a range of teapots, for example, may be, housewives will not purchase them indefinitely if they are found to drip, or pour badly. The manufacturers of such a product will have to cease producing it.

In Figure 11 we see a range of traditional teapots, not over-ornamented, but simple in construction and design, that sell because they pour properly. The eighteenth-century Wedgwood shape which is still in production has often been noted. Another well-known firm in the Potteries—Dudson's—who supplied the teapots for Lyons cafés in the 1924 Wembley Exhibition and for their branches throughout Britain, has not altered the shape of its teapots and jugs since they were displayed in the 1851 Exhibition; and to this day there is a large demand for them.

If a teapot not only functions well but has an added charm of shape or decoration, then the customer's demands may be modified; elements introduced by the decorative designer may influence his taste.

Being human, the customer has his fads. He may admire a design loved by parents or grandparents. There may be a liking, on sentimental as much as aesthetic grounds, for willow-pattern, for lustre ware, for floral decorations. In recent years, there has in fact been a revival of interest in floral decoration for tea, coffee and dinner services (Figures 13, 14, 15, 16) as well as ornamental wares. While some of the

through  
are seen

s, for  
them  
badly.  
ave to

apots,  
n and  
The  
till in  
well-  
sup-  
mbley  
ritain,  
since  
nd to

added  
's de-  
by the

e may  
rents.  
ch as  
ware,  
as in  
on for  
5, 16)  
of the

umber 23



13, 14: FLOWERS AND LEAVES still provide the most popular motifs for pottery decoration—with varying degrees of compromise between the natural and the formal: compare examples on this page and overleaf. Above left, Wedgwood's Pink Pimpernel, designed by Victor Skellern, ARCA, NRD: right, Shelley Potteries' Pompadour. Both patterns are in china; both in current production for overseas



15: Chatsworth tableware in Royal Doulton fine bone china: a pattern that is selling successfully in America. Fluted shapes have long been familiar in English pottery design, but this particular fluted shape (Montrose) is a product of our own century—as is its formal flowered border





16: CONTEMPORARY TREATMENT of a natural subject is seen in the stylised leaf motifs of the pattern above. Note the counter-change, as between predominantly dark and light pieces, from light to dark decoration. This dinner ware, like that below, is designed by Susie Cooper, RD1, for the Susie Cooper Potteries Ltd

#### ENGLISH TRADITION IN POTTERY DESIGN *continued*

floral patterns in production today are almost wholly traditional, others are seeking to build on the tradition of the past by treating leaf or flower patterns in a different—usually a more formal—way (Figure 17). Here we are half-way towards the purely formal decorative patterns which are also found in contemporary pottery design (Figures 17, 18).

To forecast future trends would be unwise, but we must always remember that, among the many influences affecting design, besides the conservatism of which we hear so much, a desire for change is inborn in most people—though admittedly stronger in some than in others.



17: Breaking right away from the flower-fruit-and-foliage style of pottery decoration, this Starburst design is patterned with stars in brown and blue; the borders are in brown and black



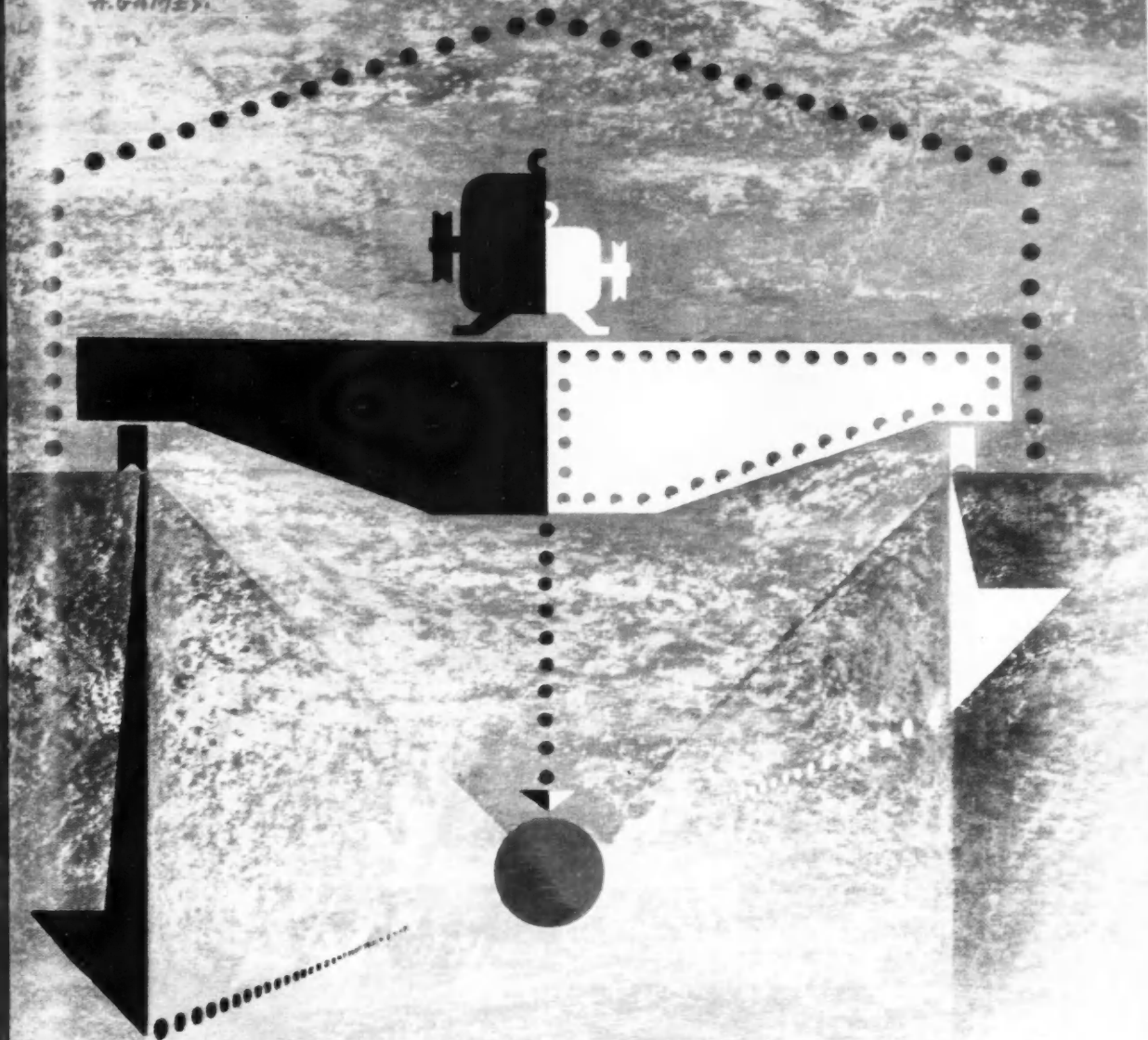
inter-  
signed

e style  
t with  
black

ber 23



A.GAMES.

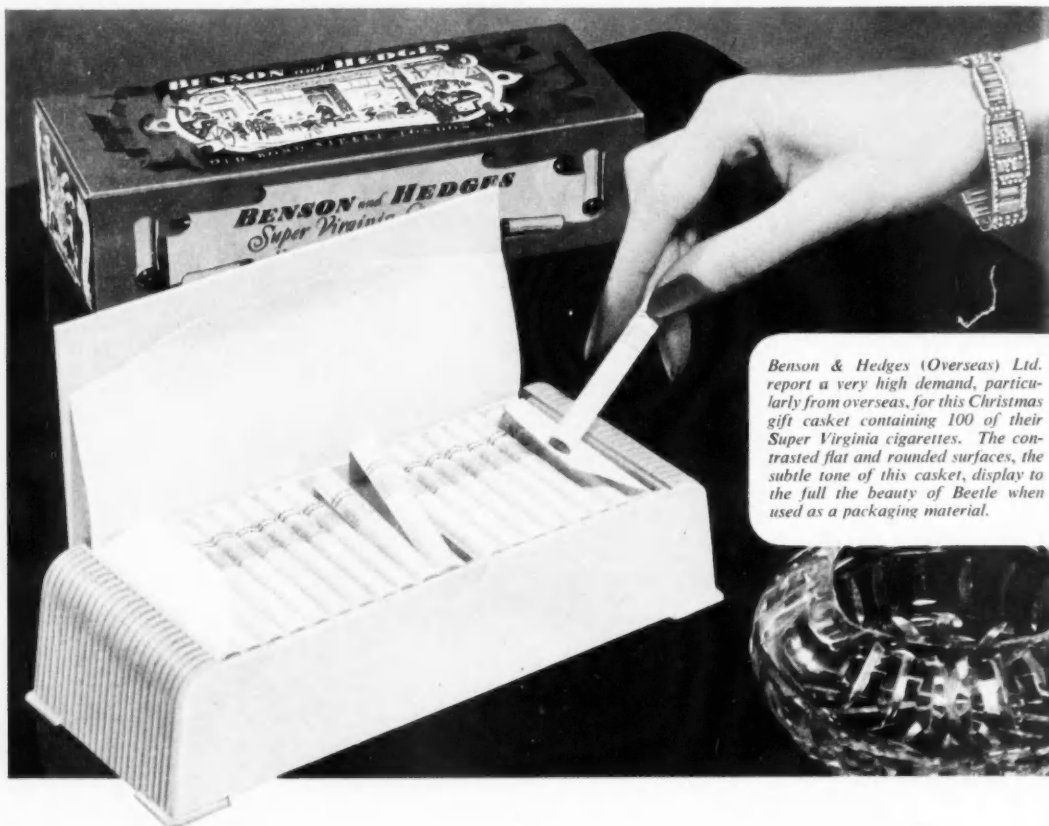


Aluminium Long Span Overhead Cranes reduce deadweight and thereby allow lighter supporting structure or increased rated load. Reduced inertia means more rapid manipulation and smaller driving motors. High durability cuts maintenance costs.

***THE BRITISH ALUMINIUM Co Ltd***



SALISBURY HOUSE LONDON EC2



Benson & Hedges (Overseas) Ltd. report a very high demand, particularly from overseas, for this Christmas gift casket containing 100 of their Super Virginia cigarettes. The contrasted flat and rounded surfaces, the subtle tone of this casket, display to the full the beauty of Beetle when used as a packaging material.

"Only the best will do" is the slogan of Benson & Hedges Ltd. This means they chose Beetle moulding powder for their cigarette casket in order to ensure the highest standard.

A container made from Beetle or Scarab moulding powder meets with immediate approval by virtue of its rigidity, and its sound workmanlike strength. You admire the smoothness of its contours and the pleasant texture of its surface. But above all you appreciate its *colour*. The colour possibilities of Beetle and Scarab are unlimited. Beetle offers a choice of translucent, semi-translucent and opaque colours — from pure primaries to the softest of pastel shades. Scarab, more economical, is also made nowadays in a range of attractive pastel shades.

Write for our Technical Leaflets Nos. MP. 1 - 8 or call in the B.I.P. Technical Service to co-operate with your designer and help in choosing the right material to ensure the best results.

*Beetle and Scarab Standard Moulding Powders conform to BS. 1322.*

## BEETLE AND SCARAB

AMINOPLASTIC MOULDING POWDERS

Distributed by **THE BEETLE PRODUCTS CO. LTD.** 1 Argyll Street, London, W.1

*BEETLE and SCARAB are trade marks registered in Great Britain and in most countries of the world.*



## Lettering in cast iron

Complementary to last month's article on the design of separate nameplates are these notes on the design of integral lettering

by James White

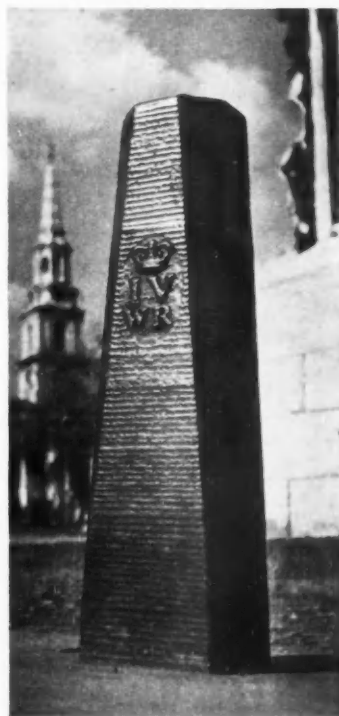
THE DESIGN of a casting to form a component part, a housing or base for a machine, may well include a maker's name or trade-mark. A technical designer-draughtsman will no doubt be familiar with casting technique and clearly understand what is a *practical* letter section, but he may not have much appreciation of good lettering. An artist-designer, on the other hand, may not be familiar with cast-iron moulding technique. The aim of the following notes is to make their aims mutually understandable.

The procedure in iron casting is briefly as follows. The pattern-maker—who is a very skilled craftsman with a full understanding of moulding problems, taking into consideration shrinkage allowances to compensate for contraction of metal after cooling—makes a pattern from the designer's working drawing. The finished pattern may be made of wood or metal, or a combination of both. From this pattern, by machine or hand, is formed the sand moulding. The pattern is then withdrawn, the molten metal is poured, and, after cooling, the sand mould is removed. The casting is then complete.

Figure 4 shows the average surface finish to be expected from sand-moulded iron castings; it will be seen that this comparatively rough surface, while adequate for the purposes for which cast iron is generally used, would tend to soften sharp lines. That is why cast-

iron machine housings or component parts generally have soft blending contours and taper, wherever possible. Quite apart from the fact that they improve appearance, curve and taper facilitate ease of moulding, and allow a pattern to be withdrawn from the sand mould without damaging or disturbing the surface prior to casting.

If sand or shot-blasting is used for cleaning-up the finished casting, it must be remembered that this abrasive action will tend to soften the original design still further. In considering the casting problems involved, it is obvious that the letter designer should avoid small letters wherever possible. If they are considered to be essential, he should use a separate name-plate instead of trying to incorporate them in his casting. In cast iron, the designer must be prepared for loss of definition, and design his letters boldly to counteract the softening effect. He may, of course, design his own letters, or alternatively he may use stock pattern-makers' letters (and numerals); he can then make a choice of styles from the illustrated lists which most pattern-makers have available. It must be admitted, however, that their styles of lettering sometimes present a choice between greater and lesser evils, aesthetically—though they are no doubt practical from the caster's viewpoint. The fact that letters from different manufacturers are likely to be used together perhaps deters the more progressive



The present-day designer of lettering for casting has plenty of historical precedents. 1: Dignified simplicity of lettering, appropriate to the casting process, is seen on the Whitehall bollard, above

2: Fifty years later, elaboration had set in. The example below is part of a cast-iron seat-back on Skegness pier



3: Tapered or radiused sections, as A to E above, are most satisfactory for casting. F shows the untidy effect of blow-holes exposed by machining: compare Figure 5 overleaf



continued

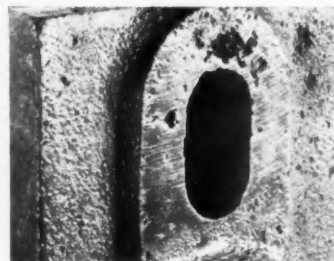
firms from effecting improvements in letter-forms which they know to be desirable, since their letters would probably be used alongside those of other makers, and would not match them.

Clear instructions are necessary on a working drawing, giving exact location and style, or the pattern-maker will make his own choice and possibly insert letters which are not in keeping with the overall design. The letters A to E in Figure 3 are based on the stock letters which are available, but they have been modified slightly in drawing to give more pleasing proportions. It will be noted that the section of each letter is either a radius or a taper upwards towards the face of the letter. The semi-circular letter-section is ideal, but it can rarely be employed as it tends to flatten the appearance unless each letter stands out in high relief.

The surface of cast-iron letters should not be machined, as the result may be irregularity of profile and possibly the exposure of small blow-holes, giving the lettering an untidy appearance, as seen in the F of Figure 3. Figure 5 is a close-up of an actual casting where the surface has been machined, exposing blow-holes. These holes do not always warrant rejection of a casting, and they can be filled in before final painting, but this patching-up would be difficult in the case of relief lettering. It is better to avoid machining altogether, and accept the limitations of the process.



4: The degree of surface finish which can normally be expected in sand-moulded iron castings for machine parts



5: Machining the surface may expose blow-holes which, while structurally unimportant, mar the appearance of the casting



6: Pattern-makers' letters from the range manufactured by Butler Jones (Nameplates) Ltd. "Sharp face"—above—have a taper of  $33^\circ$  and the thickness increases with the size. (There is a range of sizes from  $\frac{1}{16}$  in. to 2 in.) "Flat face"—the lower group—have a taper of  $23^\circ$ , slightly rounded corners, and a uniform thickness of  $\frac{3}{16}$  in. for all heights from  $\frac{1}{16}$  in. to 2 in.

## Design in Palladium

IN THE ROSE-BOWL designed and made by R. E. Stone for the Institution of Metallurgists, the precious metal *palladium* has been used for the first time in this country for work of this kind.

Pure palladium is a white ductile metal of the platinum group, weighing only half as much as pure platinum. For making this bowl, it was alloyed with rhodium (another metal of the same group) which improves the mechanical properties without detracting from the lustrous colour of the palladium.

For fine jewellery, palladium is being increasingly widely used; in France it has also been employed for larger pieces comparable with the rose-bowl.

The Institution of Metallurgists presented this bowl to HRH Princess Margaret when she opened a recent exhibition at the Science Museum.



An alloy of palladium and rhodium has been used in the making of this rose-bowl

## National Diploma in Design— an unrecognised qualification?

SIR: H. McG. Dunnett's article (in *DESIGN* No 20, pp 8-13) sets out clearly the position in the art schools today—with one notable exception.

I refer to the Ministry of Education Examinations in Art; particularly to the National Diploma in Design, which is of considerable importance to industrial design students.

I worked hard as a student to pass this examination in the days when it was called the Examination in Industrial Design (a misnomer, I always thought). Since passing it, no one in industry has asked me if I had taken such an examination, and it now seems doubtful whether any of my past employers had ever heard of it.

In view of the immense amount of study and ability required to pass this examination in its modern form, would it not be of vital importance for designers and industry alike if the FBI could bring to the notice of industry generally that applicants for positions as industrial designers possessing the NDD are properly qualified within the scope of regional training?

It seems possible that one of the reasons why the percentage of students taking courses in industrial design is low is that intending students have to contemplate several years of hard work for a qualification which is virtually unrecognised; at least, this would seem to be the case in the Midlands.

JOHN BARNES, MSIA  
Chairman

Midland Industrial Designers' Association  
Leamington Spa

### Texture—and shine

SIR: Recently, I was informed that a hard covering material for seating—such as leather, leathercloth, plastic, or plain polished wood—did not tend to shine the seat of one's trousers; a textile covering, on the contrary, caused excessive shine.

On demanding an explanation for this statement one was informed that the exterior staples of the textiles used for trousers and chair covering locked together, and when any movement took place the exterior staples were gradually sheared off, leaving a surface which would readily accept a shine. My informant went on to explain that laboratory

tests had confirmed the theory: a disc of fabric revolving against a piece of felt had become polished very quickly, whereas a similar piece of material against a plastic material had not become polished. The tests have been extended to a number of materials and confirm the theory in each case.

In view of the widespread belief that an office chair, for example, is best covered in a textile to prevent the shining of one's clothes, it would be interesting to have other observations—particularly from textile manufacturers.

London SW4

W. NOEL JORDAN

¶ Choice of the best materials for the job is an essential part of product design, and *DESIGN* will gladly give space to information on this subject. EDITOR

### UNESCO wants to know

SIR: I read with interest the article in *DESIGN*, No 17, entitled "A Showroom on Two Wheels"—a mobile unit operated by Spicers Ltd.

I am particularly interested in the employment of the mobile technique for the promotion or popularisation of products or services. I developed and placed in operation in the United States in 1947 a mobile unit for the exclusive use of museography. I would therefore greatly appreciate it if you could make available any supplemental documentation and illustrations that you may have on the Spicer unit or other mobile units now in operation or contemplated in Great Britain for the Unesco-ICOM Museographical Documentation Centre.

KENNETH B. DISHER  
Acting Head, Museums &  
Historic Monuments Division,  
UNESCO

Paris

¶ *DESIGN* has gladly supplied UNESCO with information on a number of demonstration and display vehicles designed, made, and currently in use in this country. EDITOR

### 'Devon stole the show'

SIR: It was most interesting to see the article on the Dartington Hall Exhibition (*DESIGN*, No 21) and gratifying to see Henry Juniper's pot illustrated. He is, however, older than you state, and

threw the pot in his second year when 16 years of age. We cannot accept students under 15 (or 14.9), being a further education establishment; though we have our Saturday morning children's class—135 strong—in which some are promising potters. One lad of 10 had a little figure of a fisherman in the show at Dartington; all told, this school had 5 pieces of work—3 pottery and 2 silver—exhibited. . . .

Another interesting thing about this September issue of *DESIGN* . . . is that in the article on the Royal College of Art, two of the examples chosen, namely the mug by Philip Popham and the plate by Claude Smale, are made by Devonians. Popham was an ex-student of this school, and Smale, I am told, was at Newton Abbott.

One way and another, Devon has stolen the show this time. Although we are so remote from London and miss the chance to see the shows and museums, there seems to be something gained in that individual power of expression is developed.

W. J. A. CORKE  
Principal

Bideford School of Arts and Crafts  
Bideford, Devon

### Eminent Egyptians

SIR: I was interested in your piece on Egyptian type-faces.

There are two interesting examples of incised Egyptians near this office. One is on a stucco wall of a building on the corner of Rugby Street and Lambs Conduit Street; the words, GUILDFORD HOUSE, newly painted. The other is a very dilapidated affair on a ruined wall in Princeton Street; the words, MECHANICAL CHIMNEY SWEEPS, &C. This example is rapidly disappearing under the impact of the weather; it will probably be pulled down soon anyway.

WALTER TRACY  
Typographic Department  
Linotype and Machinery Ltd

London WC1

¶ From another reader comes the photograph, below, of raised Egyptian (or Egyptian) lettering above a shopfront in Dorking. See also the Festival Exhibition lettering, p 32. EDITOR



# Aerodynamics—or comfort?

—or is *ease of production* the first aim of car designers today? Experts' views on this controversial subject, recently published, are summarised here by Alec Davis

IN RECENT ARTICLES on car design, two authors—Tibor Haas and Gordon Wilkins—have made notable contributions to the literature of the subject.\*

Mr Haas's scholarly article cannot easily be condensed because it occupies 9½ pages of *The Engineers' Digest*, with 22 figures and 15 references to previous articles. Its theme is summed up in the sub-title: "Aerodynamic streamlining versus styling." Mr Haas sees, as the significant trend in car design since the war, the evolution of the full-width or slab-sided body. He illustrates Italian, Czech, German and Russian cars as well as British and American, to show that the trend is truly international, and he claims that, "contrary to public opinion," it is essentially functional because:

1. "Reasons of economy, that is to say, production, favour the adoption of integral construction" of body and chassis.

2. The unified form reduces air resistance "if sufficient attention is given to aerodynamic principles"

Mr Haas further claims that it makes for

3. easier cleaning,
4. greater crash resistance,
5. greater rear-seat width.

These real advances, it is argued, have been obscured by the rush of chromium trimmings, mouth-organ fronts and unnecessary bulges which accompanied them.

The author then shows that the air-resistance to a moving car can be lowered if more attention is paid to aerodynamics in its design, and quotes drag co-efficients for 18 different cars—a necessarily arbitrary selection, since co-efficients have been published for a few makes only (and, as he points out, the tests have not all been made under the same conditions). The most fully documented tests relate to the 1949 Nash Ambassador, one of the few production cars with enclosed front wheels. Better aerodynamic design increased the top speed of this car by 7 miles an hour

when, for comparative purposes, the engine of the previous year's model was installed; and they reduced the fuel consumption, at 60 m.p.h., by one mile per gallon. "20.7 per cent less air drag is claimed than the average of all other leading American makes of cars tested. Other cars used as much as 51 per cent more power at high speeds."

Air resistance, it is pointed out, has an important effect on performance at speeds "well below the safe cruising speed." It becomes equal to rolling resistance (which, of course, aerodynamics cannot reduce) when the speed reaches 50 m.p.h. with the Healey car, 47 m.p.h. with the Nash, and something over 36 m.p.h. with the Standard Vanguard.

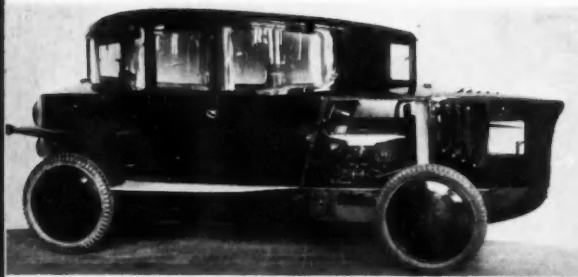
Concluding from this that "aerodynamic improvement" is a worthy aim for the car designer, the author notes some of the other aspects of mechanical design which it brings into prominence—e.g.

- desirable engine speed;
- air-resistance in the cooling system;
- interior ventilation of the body;
- noise resulting from local turbulence;
- a need for adjustable springing.

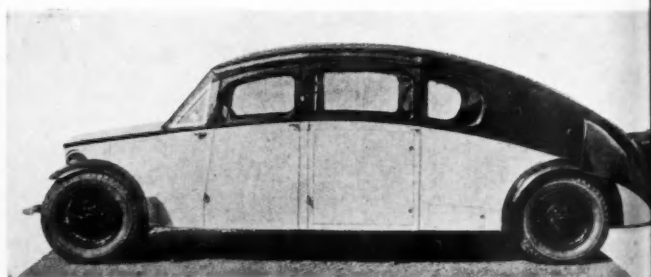
"Further progress seems to lie in . . . the application of light alloys to body construction," he argues. "Production considerations would require still more rounded shapes when using aluminium alloys"; and these rounded shapes help to reduce air resistance. Lighter bodies also tend to improve acceleration, braking, climbing and road-holding.

Mr Haas concludes that "aerodynamic streamlining offers a great opportunity to artists of vision. . . . In my submission it is the aerodynamic aspect of car body design that enables the designer to evolve forms that are theoretically correct. A yardstick is afforded which removes this problem from the realm of aesthetics, if not wholly, at least to an

\* "Present-day Car Design Trends," by Tibor Haas, dipl. ing., AMI Meche. AFRACS, in *The Engineers' Digest*, August and September 1950; "The Struggle for the Odd Inch" by Gordon Wilkins, in *The Autocar*, 4 August 1950.



**1921:** Edward Rumpler's saloon (illustrated here by courtesy of the Deutsches Museum, Munich) was one of the first streamlined cars. It was rear-engined and had independent suspension



**1930:** Among British streamlined cars, Sir Dennis Burney's saloon—also rear-engined—was a pioneer. The high price of this model prevented it from becoming popular. In such features as the short nose, long tail, and placing of seats between the axles, the Rumpler and the Burney had more in common with 1950 designs than with the typical car of 1930

extent sufficient for reasonable progress to be made."

Is such a divorce desirable? It would be, unquestionably, if the motor car were merely a means of getting from A to B. But it would be wilful blindness to ignore the fact that buyers are influenced by aesthetic judgments (sound or unsound) in choosing their cars. The motor vehicle is not only a means of transport, it is also an expression of its owner's personality and, to some extent, an indication of his social status. In these circumstances we believe that the problems of car design must remain, in some degree, problems of aesthetics.

Gordon Wilkins, in his *Autocar* article (4 pages, 14 illustrations) also discusses the slab-sided body. "Everyone knows"—according to Mr Wilkins—"that since the war the full-width body and forward location of seats have given us more body space and luggage room than ever before"; and it is to the designers' desire for roominess that he attributes both this and other recent trends in car design. In this way he explains the adoption of:

- new positions for controls;
- new forms of upholstery giving adequate comfort with less bulk;
- new suspension systems which do not reduce the useful space in the luggage locker;
- short engines (V6's, V8's, flat fours and flat twins) instead of longer engines with the cylinders in line;
- new positions for the gearbox—under the seats (as patented but not yet practised by Austin) or adjoining the back axle, where it does not encroach on the space in front of the driving position;
- smaller wheels and tyres. These are being adopted despite the fact that they have been criticised "because they fall farther into the holes and

make more revolutions per mile, which probably causes the tyres to wear out more quickly."

Mr Wilkins points out that with the full-width body it is not practical to use the old type of chassis frame, tapering gently inwards towards the front. Instead, "the frame has to be kept out at full width to a point right behind the wheels and then cranked sharply inwards. . . . This produces an engineering monstrosity which is fundamentally weak; and the designer has to provide the necessary strength by building a bridge to embrace the scuttle structure and then connect it by struts to the forward extensions which carry the engine and the front suspension. By then he is well on his way to the integral structure, especially as the coachbuilder often welds parts of the body to the chassis anyway. . . ."

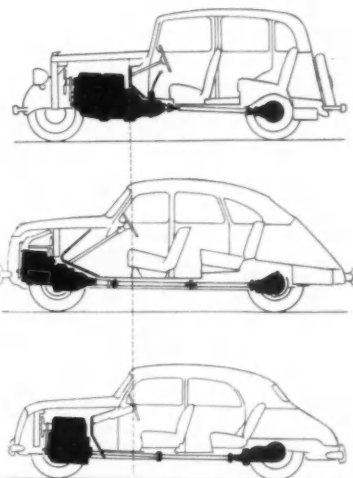
It will be seen that the articles by both Tibor Haas and Gordon Wilkins tend to become *apologias* for the full-width body and for the integral construction of chassis and body. But do these trends of design need defending? Both authors are too wise to attempt any defence of showy trimmings and restricted headroom, yet these are the features of post-war car design which have probably come in for most criticism. They have been *incidental* to full-width bodies and integral construction; they are not inevitable results of these trends.

Mr Wilkins's article was preceded by a leader-note in the same issue of *The Autocar* telling "amateur design critics" that they would find the reading of it "a salutary experience." This warning did not prevent one reader, who admitted his amateur status, from writing to express a user's view \* on the subject of car design. This reader (H. Parkhouse, of Fleet, Hampshire) expressed approval of

efforts to give passengers more space, but asked why this could not be achieved by lengthening the wheelbase. There would be technical problems involved, he said, but the manufacturers could solve them if they wanted to.

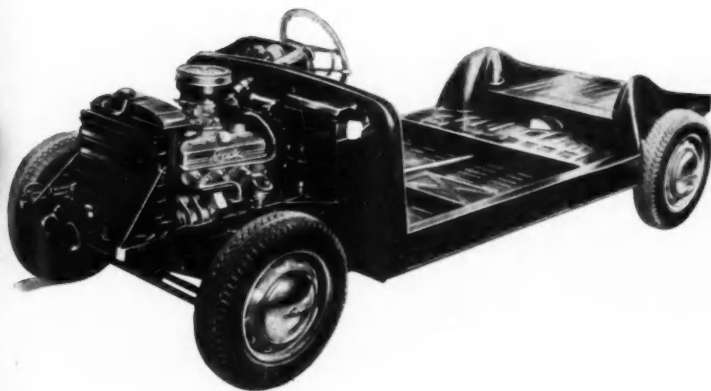
"Do they want to?" Mr Parkhouse then asked. "Isn't everything, including design, passenger comfort, baggage-carrying capacity, accessibility and appearance, being subordinated to manufacturing methods, *i.e.*, the desire to have as much of the vehicle as possible quantity-pressed from very thin sheet steel?"

To this pertinent enquiry from an owner-driver of thirty years' standing, no reply has yet appeared. The British motor industry has achieved marvels in production and especially in export sales, but the virtue of some features of present-day design is not above question. Who has the answers?



How Gordon Wilkins epitomises 20 years' progress in his article in *The Autocar*. Top: the 1930 car, in which, he says, "passenger space was subordinated to mechanical components." Centre: the Jowett Javelin (designed 1945), with mechanism "rearranged to suit passenger convenience." Bottom: the Lancia Aurelia, which "goes farther, with clutch and gear box moved to the rear to provide more even weight-distribution."

The Lancia Aurelia was one of the least spectacular new cars at this year's Motor Show, but technically one of the most interesting. Its chassis (left) illustrates the integral construction which is in many ways desirable—and the narrowing of the frame immediately behind the front wheels, made necessary by the full-width forward seat position, with the scuttle used, in Gordon Wilkins' phrase, "as a bridge to provide strength in the awkward area. . . ."





## Industrial Design Abstracts

**Aircraft:** "Comfort in Britain's Airliners." The accessories exhibition at this year's SBAC show at Farnborough indicated by its extent and success the importance manufacturers and designers attach to the furnishing and comfort of aircraft. *The Furniture Record*, 22 September 1950

**Cars:** "Interior Viewpoint," by Catherine Stokes. A survey and criticism of details of interior furnishing and fittings in British cars. *The Autocar*, 15 September 1950

**Furniture:** "Danish Design," by P. Yabsley. An account of visits to Danish cabinet-makers and furniture firms, with favourable comments on both their expensive and mass-produced pieces. *The Cabinet-Maker*, 2 September 1950

**Furniture:** "Novel Ideas in Furniture." A note on recent Dutch multiple-plywood and rattan furniture. *Holland Shipping & Trading*, Rotterdam, 14 August 1950

**General:** "Design and the Public House." It is noted that the brewing industry has an unrivalled opportunity for educating taste in the design of small things: bottles, glasses, labels, cutlery, etc. *A Monthly Bulletin*, issued by the Brewing Industry, September 1950

**General:** "The American Housewife Speaks her Mind." Comments by an

American housewife on deficiencies in style and quality in a number of British goods—gloves, slacks, drapery materials, and pottery. *Betro Review*, August 1950

**General:** Six articles describe Oslo's new city hall, its structure, exterior and interior decoration and furnishings. Some rooms are marred by lack of unity between the architecture and furniture, lighting fittings, wallpapers, etc. The silverware, dinner-services, table-linen and glassware are simple by contrast. *Bonytt*, August/September 1950

**General:** "Tying Design to Sales." An account of some American products—a plough, a sander and a hearing aid—which have increased their sales appeal through new design features. *Modern Industry*, New York, 15 August 1950

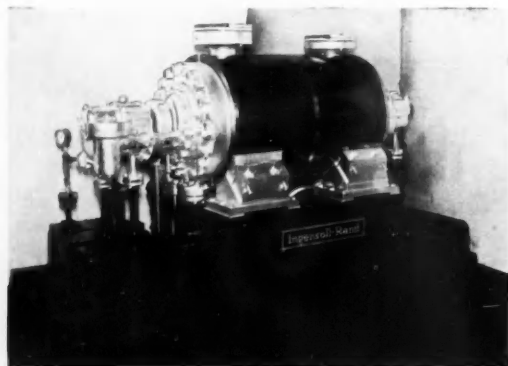
**Hand-tools:** "North America Demands Colour." Peter Boulton, of Nash Tyzack Industries Ltd, comments on the liberal use of colour in American hand-tools. The main colours in use are jonquil yellow, red, Milan blue and orange. *The Ironmongers' Weekly*, 21 September 1950

**Interior decoration:** "The Year's Work." Thirty pages of illustrations of American domestic and commercial interiors created 1949–50. *Interiors*, New York, August 1950

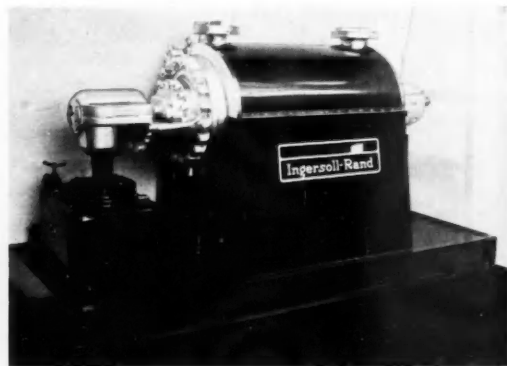
**Kitchen equipment:** "Modern Gas Cooker Design," by Arthur Forshaw. In structure the use of cast iron has been largely superseded by sheet steel with vitreous enamel finish. This results in better appearance, easier manufacture and subsequent handling and fitting, and eventual price reduction. Although English ovens are generally larger than continental ones, the continental type of falling oven door is often adopted to advantage. Designs are flexible to allow of alternative fittings and easy removal of parts for cleaning. Overall shape has been tidied up, so that there are no projections, and a variety of bases has been evolved. *The Domestic Equipment Trader*, September 1950

**Lighting:** "Review of Decorative Fluorescent Fittings." This account emphasises the need for variations in the present style of fluorescent fittings. *Electrical & Radio Trading*, September 1950

**Machinery:** "Redesigned for eye-appeal." Redesign of a boiler feed unit of the double casing type used at pressures up to 2900 lb per square inch has simplified parts for manufacture and assembly and improved the shape (see illustrations below). This was achieved by the US manufacturers Ingersoll-Rand, in collaboration with Nowland and Schladermundt. The base was broadened and extended upwards to meet the cover and make a continuous surface. Lowering the gear oil pump into the oil reservoir had the double advantage of hiding an unsightly part and eliminating the need for priming. The bearing bodies were given smooth sleek shapes through the replacement of the piping to and from the thrust bearings by passages in the extended oil pump body. The remaining accessories were incorporated into the reservoir, with the exception of the oil



This Ingersoll-Rand boiler feed pump, referred to above, has been redesigned and the new model (right) is both easier to build and to service



Many improvements to the shape of the pump have also been achieved. Unsightly parts are now hidden yet the unit still expresses its function of heavy duty service



rn Gas  
orshaw.  
has been  
el with  
sults in  
ufacture  
fitting,  
though  
er than  
type of  
d to ad-  
allow of  
noval of  
ape has  
no pro-  
as been  
equipment

corative  
account  
ions in  
fittings.  
September

eye-ap-  
unit of  
pressures  
as sim-  
assem-  
the illu-  
ved by  
l-Rand,  
and and  
broad-  
meet the  
surface.  
to the oil  
tage of  
inating  
g bodies  
through  
and from  
the ex-  
aining  
into the  
the oil

so been  
nit still

umber 23

cooler which was intentionally left exposed because it varies appreciably in size according to the customer's choice. The main flange of the pump was not materially changed as it was felt that the circle of large nuts gave the machine a rugged appearance suggesting its high pressure service. As it is now possible to open up an installed pump by breaking only one oil piping connection, the final result of redesigning this pump is that it is both easier to build and to service. *The Engineer's Digest*, February 1950

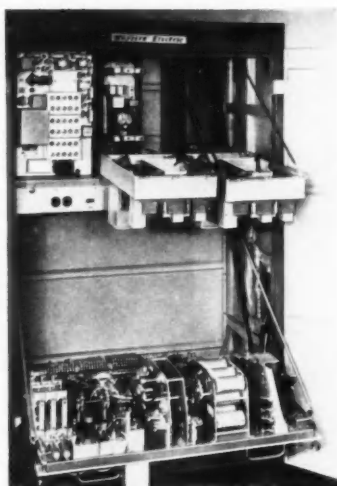
**Machine tools:** "New Goals in Machine-tool Engineering"; a leaflet, reprinted from *Electrical Manufacturing*. F. V. Geier, President of the Cincinnati Milling Machine Company, considers the contribution of machine-tool design towards reducing manufacturing costs. He describes some features of American machines, which have brought about reductions in production costs through ease of attaining close limits, ability to eliminate costly handwork, heavier and smoother cutting, and faster operation. His management have always also stressed the appearance factor, and even on special-purpose machines the use of welded steel constructions has been of considerable help in achieving good appearance.

**Metals:** "Extruded Metal Shapes and Their Uses," by T. C. Du Mond. The advantages and limitations of extruded shapes are fully examined. *Materials and Methods*, New York, August 1950

**Motor coaches:** "Coach Design," by K. G. Batten. The design of coach interiors leaves much to be desired. Often they have an air of restlessness, even to the point of encouraging travel-sickness. There could be more co-ordination between exterior and interior design, and better colour balance. The most pleasing exteriors are those which are treated with restraint in choice of colours, and which accentuate in line the smooth forward movement of the coach. *Bus & Coach*, September 1950

**Packaging:** "Design's Critical Eye," by Henry J. Howlett. An account of a new method evolved in the US for determining the point at which a package becomes identifiable, by use of a machine called a "Visulator." *Modern Packaging*, New York, August 1950

**Plastics:** "Gilding the Lily?" Containers of precious metal on polythene have been produced by Metalplast (England) Ltd. It may be possible to plate engraved or moulded designs on the metal surfaces. *Plastics*, September 1950



Maintenance of the marine radio telephone cabinet by Western Electric has been simplified by allowing each part to tip separately for servicing. One receiver, upper section, is in operating position, the remaining two and the transmitter beneath them are lowered for servicing



The remote control unit used in conjunction with the radio telephone equipment, left, is unusually neat in appearance

**Pottery:** "The United States Market for Imported Pottery," by Edward R. Killam of the US Department of Commerce. The current situation in the American pottery market is analysed and its design demands outlined. Handles must be pleasing to grasp; plates must not have sharp edges that will chip; they must be easy to clean and stack. Research in the US has resulted in the production of interchangeable lids for coffee and tea pots, turned edges to prevent chipping, and saucers that can be used also as bread and butter plates. New vegetable dishes can be used to cover other dishes, and casseroles have lids that lock back without hinges. Pastel colours are favoured, and decorations kept to a minimum, though historical American scenes and single flower sprays are popular. Many dinner plates are made in contrasting colours, such as blue pastel with a rose rim. *Pottery & Glass*, September 1950

**Radio:** "Murphy Television," by Robert Nicholson. A brief note on the designs for Murphy radio and television, and their designers. *Art News & Review*, 23 September 1950

**Ships:** In two articles, "Modern Trends in Ship Decoration," and "Cargo Liner Decoration," Howard Robertson points out that the contemporary style in decoration is now more frequently found than period reproductions. The inevitable factors in ship interiors—

wide spaces, low ceilings, the presence of sheer and camber—are accepted and handled without preconceived ideas drawn from interiors on shore. Lighter and gayer colours appear in all sections. There is little likelihood that good craftsmanship in ship decoration will disappear to the same extent as on shore, as bad workmanship is a heavier liability. For crew accommodation the "interior architect" should take part in planning from the outset, for the skeleton of the accommodation must be harmoniously designed before there can be any guarantee that surface treatment will be successful. A summary is added of some products of manufacturers concerned with interior ship fitting. Supplement to *The Syren & Shipping*, 27 September 1950

**Textiles:** "Screen Printing on Glass Fabrics." An account of a process of screen-printing on glass yarns developed in America by the Owens-Corning Fibreglass Corporation. *British Rayon and Silk Journal*, September 1950

**Watches:** "Design in Geneva," by Muriel Harris. This account of the "Montres et Bijoux" show in Geneva points out that the watches and jewellery have an almost Victorian aspect. The watches are often highly elaborate in both shape and decoration, the jewellery heavily flamboyant with much fussy detail. *The Manchester Guardian*, 27 September 1950

# Notebook

## British enterprise in Canada

ONCE AGAIN, W. H. Smith and Son's active interest in design earns them a place on this page. At the end of September, Smith's opened their first Canadian shop, in Yonge Street, Toronto, where they are selling not only books and the usual Smith selection of fancy goods, but gramophone records—a new departure for this firm. The shop was designed by New York architects, but the advertising material which publicised its opening was designed and largely produced in Britain. It includes a lively multi-colour wrapping paper by Raymond Tooby which "evoked much admiration," we are told. This design has been used for wrappers, counter envelopes and gramophone-record carriers; it has been adapted for Smith's Canadian Press advertisements, and, in an enlarged form, for posters. Now it has been introduced as a Christmas gift wrapper in this country also.

Smith's clearly believe in the value of seasonal gift wrappings, as they are using both Raymond Tooby's design and another which was designed especially for Christmas use, by Margaret Blundell, NRD. Miss Blundell's design (now in its second successful season) and Mr Tooby's are illustrated on our front cover this month.

## Too-precious metals?

The Design and Research Centre for the gold, silver and jewellery industries moved into its new premises in Goldsmiths' Hall on 15 November, and preceded the move by the announcement of a competition which is intended to encourage good design in articles for quantity production, and their better packaging and presentation. This is a healthy activity in an industry which has seemed, at times, to lean too heavily on the reputation achieved by its more exclusive products, made in small quantities and right out of the financial reach of most people—especially when Purchase Tax is taken into account, as it must be. We hope that designers and, especially, members of the industry will respond to this latest lead.

The competition will close on 31 March 1951; prizes will be offered, and arrangements will be made to show

winning designs at the BIF and other exhibitions. Application forms and fuller details can be obtained from the General Secretary (A. Selwyn), Design and Research Centre, Goldsmiths' Hall, Foster Lane, London EC 2.

## Letter-forms for the Festival

Two months ago we expressed the hope that Egyptian letter-forms would find a place in the 1951 Festival exhibitions. Although the type-face which has been designed for Festival *printed* matter is right outside this category, it now seems likely that *display* lettering in the official exhibitions will fulfil our hopes.

The Festival's typography panel (chairman, Charles Hasler) has produced *A Specimen of Display Letters designed for the Festival of Britain 1951*. An unusually crisp piece of lithography, this specimen (which is not on sale) shows five related alphabets—a basic roman, extended and condensed versions of it; a light roman; and an italic. In the words of the booklet, "nothing could be more British in feeling than the display types created by the early nineteenth-century typesetters," and the Egyptians which they designed have been the starting-point for the Festival letter-forms; indeed, these have not gone far away from them.

## New Swedish magazine

*Form*, the magazine of the Svenska Slöjdföreningen, has been so successful

in arousing interest in design that it now has a wide readership among the more enlightened members of the Swedish public; but the editors doubt whether a journal with such a wide general appeal can at the same time give the right leadership to designers. They do not think it is practicable to address themselves, in the same paper, to the producers and the consumers of design. So they have started a second magazine, *Kontur* (=Contour), which is planned to appeal to designers only, discussing matters which directly concern them in their work. It is international in scope.

The cover of *Kontur*'s first issue is illustrated on p 4; its design is based on an old Chinese engraving. The Society hopes to publish two issues within a year, and aims at quarterly publication later.

## Scottish Committee members

Four new members have been appointed to the Scottish Committee of the Council of Industrial Design: Ronald Bell, assistant production manager, Co-operative Printing Works; David Maitland Gardner, MBE, chairman and managing director, A. Gardner and Son, house furnishers; William Grimmond, MBE, managing director, John Grimmond Ltd, hosiery manufacturers; and J. Crawford McKell, managing director, Ralston and McKell Ltd, wholesale textile ware-housemen—all of Glasgow.

## Tailpiece

From the caption accompanying an illustration of the new A 40 Sports model in the *Austin Magazine*, November:

This newcomer to the sports car class may well prove a world beater. It certainly has the looks!

Its body is unrecognisable as an Austin until one gets close enough to view the *motif* . . .



Pages from the *Specimen of Display Letters* for the Festival, referred to above. Left, the italic alphabet; right, a suggested three-dimensional use



*Specially designed desk in Australian walnut, with hide covered top. The chairs, also of walnut, are covered in hide.*

## Planning for prestige

The complete scheme for furniture, fittings and colour for the showroom and managing director's office at the new London office of Pal-Personna Blades Ltd. was designed and carried out by Heal's. Structural alterations included the erecting of glass brick partitions and false ceilings. Heal's are always happy to advise on the decoration and furnishing of offices, board rooms and other places of importance. They will submit designs, carry out the redecorations and make the furniture.

196, TOTTENHAM COURT ROAD, LONDON, W.1, TELEPHONE: MUSEUM 1666. TELEGRAMS: FOURPOSTER, RATH, LONDON.



*Showcase in Australian walnut, with sliding glass doors. Glass brick partition contains reception office.*

## HEAL'S CONTRACTS LTD

## GOOD LETTERING

*and fine workmanship*



### ENGINEERS' NAMEPLATES

in various finishes including "HARDENAM" (two or more colours)

### PREMISES NAMEPLATES

in engraved bronze with vitreous enamelled letters

### MEMORIAL AND COMMEMORATION TABLETS

### "INTAGLIO" PERSPEX SIGNS AND NAMEPLATES

### LETTERS AND NUMERALS

in bronze and bronze vitreous enamelled for architectural purposes



We are manufacturers of the above

## BUTLER JONES (Nameplates) LTD

Kangley Bronze Works, Lower Sydenham, London, SE 26

Bronze Founders. Engravers. Vitreous enamellers and craftsmen in metal

Design: Number 23

## 2 NOTABLE NEW BOOKS

## The Creative Craftsman

by JOHN FARLEIGH

A well-illustrated account of the fine crafts through the ages and in particular of the life and work of craftsmen in Britain today. There is much practical information direct from the craftsmen themselves.

160 line drawings and 30 photographs.  
280 pages. 21s. net.

## Old Silver for Modern Settings

EDWARD  
WENHAM

formerly editor of the  
CONNOISSEUR

A study of English, Scottish and Irish silver concerned in particular with those designs most suited to modern taste.

Lavishly illustrated.  
210 pages. 21s. net.

Both books are available from  
any bookshop.

Published by  
G. BELL & SONS, LTD.



## CLELAND PACKAGING

*is functionally*



*and visually sound..*



... and these qualities are essential in the protection and selling of your product. Be it a small carton to carry a light article or a large display outer to contain dozens, sound planning and careful production will ensure presentation in the best traditions of Industrial Design functionally and visually.

### William W. CLELAND Limited PRINTERS AND BOXMAKERS

STAPLE HOUSE, CHANCERY LANE, LONDON, W.C.2  
Phone: Holborn 2521  
AND CULLINGTREE FACTORY, BELFAST

*A compact guide and reference  
by a leading authority*



## Product Development and Design

By A. W. Willsmore, M.I.E.C.E., A.M.I.I.A., F.R.Econ.S., F.S.S. The author of this new book has here made what is probably the first attempt in this country to bring the essential features of this subject into one volume. He deals clearly with the study of the consumer and his requirements, industrial research and design, patents and trademarks and other factors contributing to the successful development of a saleable product.

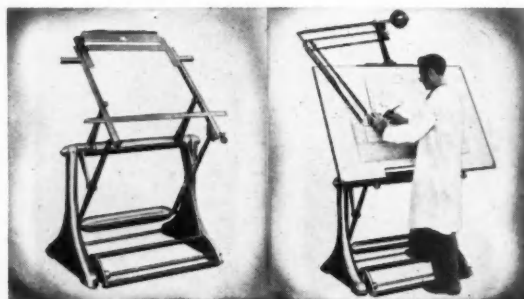
Price 12/6 net

### *A Pitman Book*

PARKER STREET, KINGSWAY, LONDON, W.C.2

### THE MASON DRAFTING STAND

The Mason Drafting Stand is designed for perfectly balanced, finger-tip control of the board, into any position from horizontal to vertical, with simplicity, speed and the minimum of effort on the part of the draughtsman. Double Elephant, Antiquarian or Hamburg drawing boards may be used, fitted with either a standard drafting machine or a straightedge parallel movement. All locking and unlocking mechanism is completely enclosed and is controlled by a simple-to-operate foot pedal.



### THE "COMPACTUM" & THE "PRACTICAL" DRAFTING STANDS

Invaluable in their own class, the "Compactum" and "Practical" Drafting Stands are tried favourites in many large drawing offices. Both are in the low-price group and each provides for full adjustment in height and angle of board. Either is ideal for use with a standard drafting machine, straightedge and parallel movement fittings or a tee square. The "Compactum" stand is especially suitable where limitation of space is a governing factor.

For full information please write to The Drawing Office Service Division of:—



**E. N. MASON & SONS LTD.,** Arclight Works, Colchester. Tel. 2266  
and at LONDON, GLASGOW, MANCHESTER and BRISTOL

LOUNGE · DINING ROOM · STUDY · BEDROOM · BED-SITTING ROOM · OFFICE · SHOWROOM

# "unad"

Trade Mark

—the name chosen for the new range of semi-unit furniture comprised of 27 pieces designed by the "Story Design Group."

Permanently displayed at "Story's"  
Contemporary Showrooms at  
7 Kensington High Street

.....

STORY & CO. LTD. (Contracts Department), 7 Kensington High Street, London, W. 8. Telephone: WEStern 0825



*"I've always used a Remington  
... this new one is superb."*

THE FIRST AMERICAN DESIGN  
ALL-BRITISH-MADE TYPEWRITER



The New Remington is superb in typing touch, in features, in looks. It embraces all the improvements you've waited for so long: Keyboard Margin Control, Key-trip Device for releasing jammed type-bars, Touch Regulator and many other exclusive features. It looks good from any angle—clean modern lines, grey-krinkle finish, chromium plated fittings. All these combine to make the new Remington the most handsome typewriter you've ever seen. You'll be proud to have it in your office. The New Remington is made in Britain, at the Remington Rand Typewriter Factory, Hillington, Glasgow.

The **NEW** Remington

\* Write for Illustrated Folder of the NEW Remington

REMINGTON RAND LTD. (Dept. KMC 93), 1 NEW OXFORD STREET, LONDON, W.C.1 Telephone: CHAncery 8888



## ADVERTISEMENTS

MANUFACTURERS REQUIRING THE SERVICES OF DESIGNERS, *whether for staff positions or in a consultant capacity, are invited to apply to the Design Advice Section, Council of Industrial Design, Tilbury House, Petty France, London SW1, for a short list of designers suitable to their particular purposes, which should be explained in some detail. This service is gratis and incurs no obligation.*

"FIFTY-ONE" FEATURES. A group of Specialist Freelance Journalists has been formed to write about the Festival of Britain, 1951. The group is prepared to produce brochures for firms and organisations to amplify the story of their achievement—and their products—that the Festival will tell. "Fifty-one" Features is contributing articles to every type of paper in Britain and overseas. A first-class art agency is associated with it. Enquiries to "Fifty-one" Features, 42 Glasshouse Street, London W1. REGENT 2582.

CREATIVE AND RECORD PHOTOGRAPHY  
Studio and Location  
RICHARD SHARPE STUDIOS  
11 Gunter Grove, London, SW10  
FLAXMAN 1822

THE APPOINTMENTS BUREAU OF THE LONDON COLLEGE OF SECRETARIES welcomes enquiries from Professional Men, Directors and Higher Executives who have vacancies for secretaries with a University standard of training. For interview by Employers, students are selected from among those who have completed their Course with the full London College Diploma. In accordance with our established custom, no fees are charged for this service. Please write or telephone to:

The Appointments Director  
THE LONDON COLLEGE OF SECRETARIES  
170 Queen's Gate, London SW7  
KENSINGTON 3228

PICTURE FRAMES AVAILABLE IN ALL SIZES. Special designs and finishes made to order. The Rowley Gallery, Kensington. Park 4349.

"SYLVIA" PATTERNED PAPERS, by eminent designers, are the latest decorative papers for book and box coverings and for all Display Purposes. Papers also supplied in exclusive designs. Sylvia Book Covers are used by leading publishers. E. Mason, 62 Belvoir Drive, Leicester.

EXHIBITION OF HOTEL AND TRANSPORT FURNISHINGS, arranged by the Council of Industrial Design, is being held at Murray Hall, Vandon Passage, London SW1 from 22 November to 15 December. Open weekdays 10 am-5 pm, Saturdays 10 am till noon. Exhibits include hotel furniture, furnishing fabrics, light-fittings and floor coverings. Photographs will show a variety of decoration schemes for hotels, ships, railway coaches and road and air transport and a range of well-designed equipment.

For COMMERCIAL PHOTOGRAPHY and the supply of quality prints and enlargements consult the Manor Studio, 57 The Green, Southall, Middx. Phone SOU. 2967.

DESIGN is obtainable, net price 2s, or 25s a year post free, from DESIGN Subscription Department, HM Stationery Office, P.O. Box 569, London SE1, or branches; or through booksellers.

Enquiries about advertising in DESIGN should be addressed to the Sole Advertisement Representative, Dennis W. Mayes, 69 Fleet Street, London EC4. CENTRAL 4447.

## Design for Christmas

The phrase, we know, could mean many things; here it means one thing only—that a year's subscription to DESIGN would make a welcome Christmas gift for any of your business colleagues and friends who do not see it already. If you want to be remembered in every month of 1951, send us the remittance for 25s and we will do the rest.

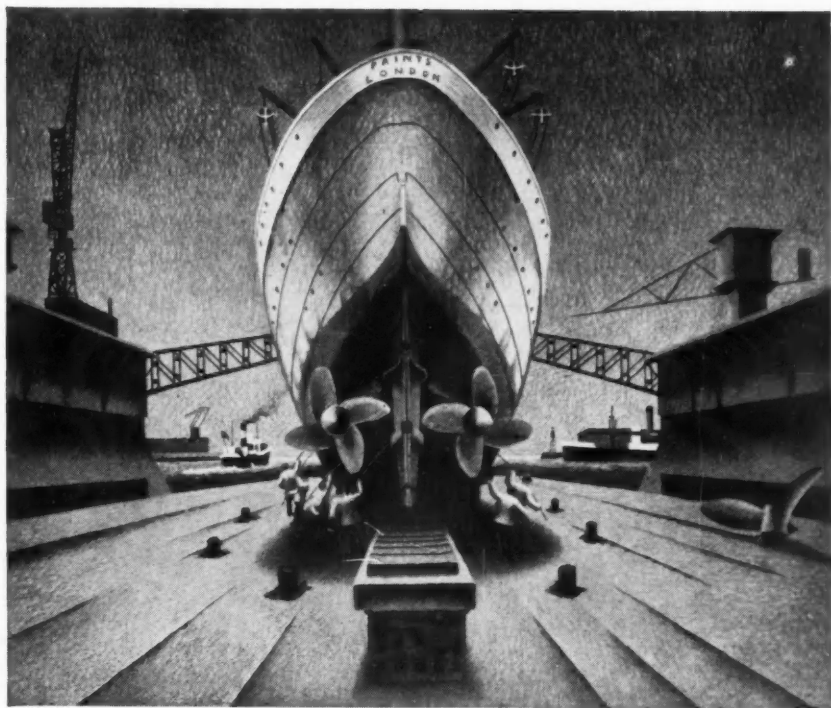
DESIGN, Tilbury House, Petty France, London SW1.

# ROWNEY

The House of Rowney, founded 1789, continues to supply to artists and designers the finest colours and materials that can be craftsman-made. Our products can be seen at:

GEORGE ROWNEY & CO LTD 10 PERCY STREET W1

# ROWNEY



## CORROSION

An eminent British metallurgist estimated that every year in the world some 30 million tons of steel become unusable by corrosion, that is by rust. This figure must largely be guesswork, but it is an impressive reminder that, though modern skill and knowledge have enabled the builder and engineer of today to improve on the work of their fathers, their greatest achievements are still wasting assets. Steel and cement may replace wood and brick, but for all their strength and hardness, they are not immune from decay. They need protecting from the effects of the atmosphere, from sun and wind and rain and sea water. It is one of the duties of the chemist to see that this protection is given in the shape of better and still better paints. Until recent years paints were simple materials, made from linseed oil or pigments such as white lead. Modern research has completely changed the picture. Today the discovery and production of new protective coverings is a highly scientific part of the British

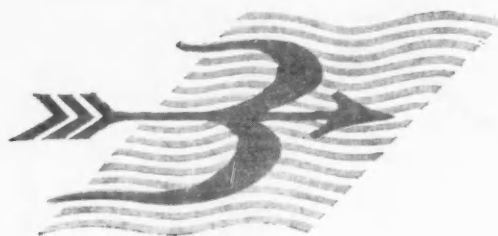
chemical industry, dealing with an ever-growing variety of chemical substances which provide the bases for new resins, lacquers, and finishes; paints specially designed to prevent rust, to stop decay in wood, to resist heat, to imitate stone; lacquers for metal work; dopes for aeroplane and balloon fabrics; finishes of every sort for every sort of article. If protection is in a sense the first requirement of a paint, decoration comes a close second. The demand for more and brighter colours has been steadily growing for years. It has been at once stimulated and satisfied by the happy collaboration between the paint chemist and his opposite number in the dyestuffs and pigment industries. Together they have enabled colour to be applied to a constantly increasing number of articles used in daily life. They contribute to a more gaily coloured world.





RS

BOWATERS



BOWATERS

BOWATERS

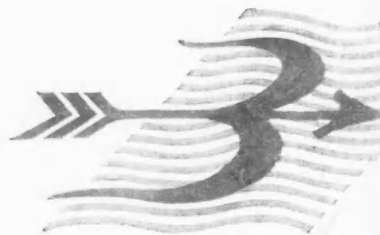


RS

BOWATERS

BOWATERS

BOWATERS



## ***Bowater mark***



**THE BOWATER PAPER CORPORATION LIMITED**

GREAT BRITAIN · CANADA · AUSTRALIA · SOUTH AFRICA · U.S.A. · NORWAY · SWEDEN

DESIGN is published for the Council of Industrial Design, Tilbury House, Petty France, London SW1 (Scottish Committee : 95 Bothwell Street Glasgow C2) by His Majesty's Stationery Office, and printed in Great Britain by Benham and Company Limited, Colchester.

K36 S.O. Code No. 88-1266-23-50.\*



RS



RS



Street